

Final Environmental Impact Statement

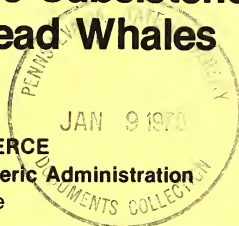
**International Whaling
Commission's Deletion of Native
Exemption for the Subsistence
Harvest of Bowhead Whales**


October 1977



VOLUME I
Summary and Text

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service





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ACKNOWLEDGEMENT

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INTERNATIONAL WHALING COMMISSION'S DELETION OF NATIVE
EXEMPTION FOR THE SUBSISTENCE HARVEST OF BOWHEAD WHALES

() Draft

(X) Final Environmental
Impact Statement

Responsible Federal Agency: Office of Fisheries Management
National Marine Fisheries Service
National Oceanic & Atmospheric
Administration
U.S. Department of Commerce

1. Name of Action: (X) Administrative () Legislative

2. Description of Action:

Bowhead whales have been completely protected from commercial whaling by the Convention for the Regulation of Whaling of 1931, by the International Convention for the Regulation of Whaling since 1947, and, subsequently, by the Marine Mammal Protection Act of 1972, the Endangered Species Act of 1973, and the Convention on International Trade in Endangered Species of Wild Fauna and Flora. These Conventions and Acts have allowed for a harvest of these whales by the Indians, Aleuts, and Eskimos. At the 29th Annual Meeting (June 1977) of the International Whaling Commission (IWC), the Scientific Committee recommended deletion of the native exemption for the killing of bowhead whales. This recommendation was accepted by the Commission by a vote of 16-0 with one abstention (the United States). This action eliminates Alaskan Eskimo take of bowhead whales, unless the United States uses its legal rights under the Convention to file an objection which would render the IWC regulation nonbinding on U.S. citizens. The IWC action would be in effect for at least one year, thus eliminating the spring 1978 harvest. The matter may be examined at the 30th Annual Meeting of the IWC in June 1978.

3. Summary of Environmental Impacts:
If the United States Does Not Object

A. Impact on the Bowhead Whale

This action will allow for the most certain recovery of an endangered species, if recovery from an endangered status is still possible.

B. Impact on Other Species

There will be some shift of subsistence hunting to other species of marine or land mammals, fish, and waterfowl, but it is unlikely that this could replace the bowhead take on a biomass basis.

C. Impact on Eskimos

The abruptness of the IWC-imposed action will have an adverse impact on the Eskimo whaling communities. If the deletion of the native exemption is extended over a long period of time, the action may have a deleterious impact on the culture, economy, and possibly health of the Eskimo whaling communities.

D. Impact on Future Research

The only significant source of material for age and reproductive studies of the bowhead will terminate with cessation of native whaling. Further research will have to be based on non-destructive observations and beached specimens.

If the United States Does Object

A. Impact on the Bowhead Whale

Native subsistence take of bowhead whales will continue. The assurance of bowhead population recovery, if recovery from an endangered status is still possible, will be reduced accordingly, although the Federal Government will attempt to decrease the annual kill

through regulations under the MMPA.

B. Impact on Other Species

Any shift, if a shift occurs at all, of native subsistence hunting pressures to other species will be minimized.

C. Impact on the International Whaling Commission (IWC) and the U.S. Position

Conservation measures such as catch limits could be nullified if other nations follow the U.S. lead and object. U.S. position stressing no objections by other nations, irrespective of hardship, could be compromised.

4. Alternatives:

The proposed action under consideration is whether the United States should accept the International Whaling Commission's action to delete the native exemption for the killing of bowhead whales. The alternatives are to object or not object.

5. Comments on DEIS:

Appendix A contains a list of Government Agencies, organizations and selected individuals receiving the DEIS for review and comments. Written comments and response to those comments on the draft statement are contained in Section IX.

6. Public Hearing:

Public hearings on the Draft Environmental Impact Statement (DEIS) were held at the following times and locations:

September 8, 1977
Department of Commerce
Washington, D.C.

September 12, 1977
Barrow, Alaska

September 15 and 16, 1977
Kotzebue, Alaska

Transcripts of the public hearings are available for public review at the following locations:

National Marine Fisheries Service (NMFS):

NMFS - Juneau, FAK
P.O. Box 1668
Juneau, Alaska 99802
Seattle operator: 8-399-0150 (FTS)
Ask for: 907-586-7221 (commercial number)

NMFS - Washington, D.C.
Page Building #2, F33
Washington, D.C. 20235
phone: 202-634-7461

NMFS - Anchorage, FAK/A2WA
632 West 6th Avenue, Suite 408
Anchorage, Alaska 99501
Seattle operator: 8-399-0150 (FTS)
Ask for: 907-265-4422 (commercial number)

Fish and Wildlife Service (FWS):

FWS - Anchorage
1813 D Street
Anchorage, Alaska 99701

North Slope Borough Office
Barrow, Alaska

City Hall
Kotzebue, Alaska

7. Draft Statement to CEQ: August 12, 1977

8. Final Statement to CEQ:

I. DESCRIPTION OF THE PROPOSED ACTION

The proposed action under consideration is whether the United States should accept the International Whaling Commission (IWC) action to delete the native exemption for the killing of bowhead whales, thus prohibiting the spring 1978 harvest.

The matter of native exemption for the killing of bowhead whales will be reconsidered at the 30th Annual Meeting of the IWC in June 1978, thus the effect could possibly be limited to a single hunting season. It may be possible that this matter will be reconsidered at a December 1977 meeting of the IWC (see written comments from the Marine Mammal Commission in Section IX).

The final EIS presents the domestic and international as well as the environmental factors to be considered in reaching a decision on this matter.

The following options are under consideration:

1. Do not file an objection and recommend the issue be considered at December 1977 IWC meeting.
2. File an objection. Further action would include taking steps to regulate the native subsistence harvest under the Marine Mammal Protection Act of 1972.

II. ENVIRONMENTAL SETTING

A. Domestic and International Regulatory Background

The bowhead whale is considered one of the most endangered species of large whales. On December 2, 1970, the bowhead whale was listed as "endangered" under the Endangered Species Conservation Act of 1969 (35 FR 18320) and remained listed as "endangered" under the Endangered Species Act of 1973. It is also completely protected from international commercial trade by the Convention on International Trade in Endangered Species of Wild Fauna and Flora. Bowhead whales have been completely protected from commercial whaling by the Convention for the Regulation of Whaling of 1931, by the International Convention for the Regulation of Whaling since 1947, and, subsequently, by the Marine Mammal Protection Act of 1972, and the Endangered Species Act of 1973. Under each of the aforementioned authorities, however, exceptions have been made to allow subsistence whaling by indigenous people. The bowhead is an important species in the subsistence and social culture of the Eskimos in Arctic Alaska.

International Whaling Convention

Paragraphs 1, 6, and 7 of the Schedule to the International Whaling Convention of 1946, revised 1976, are applicable to the harvest of bowhead

whales by aborigines. Paragraph 1 (1) includes Balaena mysticetus, the bowhead, in the definition of "right whale." Paragraph 6 (b,c) classifies right whales as a Protection Stock which is defined as follows: "A Protection Stock is a stock which is below 10 percent of MSY stock level. There shall be no commercial whaling on species or stocks whilst they are classified as Protection Stocks." Paragraph 7 specifies that "...the taking of gray or right whales by aborigines or a Contracting Government on behalf of aborigines is permitted but only when the meat and products of such whales are to be used exclusively for local consumption by the aborigines." The MMPA Sec. 101(b) provides that the provisions of the Act do not apply to any Indian, Aleut, or Eskimo.

The world community has recognized that numbers of bowhead whales in the western Arctic have decreased because of commercial harvests in the last half of the last century. While the bowhead was not designated as an "endangered species" until 1970 by the United States, commercial whaling essentially ceased shortly after the turn of the century.

From the provisions of the International Convention

on Whales and Whaling of 1931 to the present, aboriginal people have been able to take bowhead whales for subsistence use.

In 1973, more than 80 nations attending the conference which developed the International Convention on Trade in Endangered Species of Wild Fauna and Flora agreed to list the bowhead whale as an endangered species and placed it on Appendix I of the Convention.

Beginning in 1972, the Scientific Committee of the IWC expressed concern about lack of U.S. scientific research on the bowhead whale and on what appeared to be an increasing whaling effort by Alaskan Eskimos that could be threatening the bowhead populations.

At the same time the Scientific Committee was beginning to express concern about bowheads, the attitude of the United States within the IWC and of the IWC was changing significantly. Since the early 1960's the United States and other member nations of the IWC became concerned that the actions of the Commission were not effectively conserving the whales. Repeated efforts such as the establishment of a special committee of three and later four scientists did not result in sufficient improvement and were too late to stop the severe depletion of blue and humpback whales. Since 1972, the United States has maintained

a strong position favoring a 10-year moratorium on all commercial whaling. The IWC has not adopted this moratorium, but as a compromise between the different views implemented the New Management Procedure (NMP) in 1975. This Procedure relies heavily upon advice from the Scientific Committee and requires that any stock of whales more than 10 percent below MSY level be protected from harvest. The approach is designed to assure that no further stocks of whales will be depleted to severely low levels, as were the right, bowhead, gray, blue, and humpback whales.

In 1973 the IWC set a quota of 5,000 for the Southern Ocean minke whale harvest. The Soviet Union and Japan filed objections to this limit. The two nations established their own minke whale quota at a level of 3,000 animals above the IWC recommendation.

The Secretary of Commerce, after consultation with the Marine Mammal Commission, certified, under the terms of the Pelly Amendment to the Fishermen's Protective Act of 1967, that the Japanese and Soviet take of minke, sperm, and fin whales above the IWC limit diminished the effectiveness of the IWC. The President, in response to this certification, chose to postpone any decision concerning embargo of fishery products from these two nations until their actions with respect to quotas established at the 1974 meeting

could be evaluated. This action served to encourage compliance by these two nations and neither nation has placed any objections since 1973 although the reductions in catch limits have continued. Since 1973, the total catch limits have been reduced approximately 60 percent.

The United States and other nations have been working within the terms of the New Management Procedure to establish catch limits which will maintain stocks at or above MSY levels. The key to success in this endeavor is the Procedure provision that the Commission is to rely heavily on the recommendations of the Scientific Committee, thereby establishing greater international credibility. Since the IWC nations supported the Procedure, it is difficult for them to vote against any recommendation from the Scientific Committee no matter how much hardship is created for the whaling nations.

The United States is now utilizing the New Management Procedure as part of the worldwide effort to encourage all whaling nations to become members of the IWC. The United States is seriously considering application of the Pelly Amendment to two non-member nations, the Republic of Korea and Peru, because their whaling activities in 1976 were in excess of IWC established

quotas. In his Environmental Message, President Carter requested a report on all nations which are diminishing the effectiveness of the IWC.

In 1977, the United States in its comments on a revised IWC Convention expressed two new policies on whale conservation. These were: (1) coastal nations should have the right to take action more restrictive than the recommendations of the IWC; and (2) the new Commission to be established under a revised IWC Convention will adopt regulations based on scientific investigations. In 1977, President Carter sent a message to the International Whaling Commission urging the conservation of whales. This message noted that a prohibition of whaling within the U.S. 200-mile limit within the context of the Marine Mammal Protection Act of 1972 had been recently put in effect.

In summary, the United States has been a major proponent and leader in worldwide whale conservation for the past 6 years. Through the administrations of three presidents, the U.S. policy has been consistent. The United States started out with the strong support of only three nations, Argentina, Mexico, and France. Today, the United States also has the support of New Zealand, The Netherlands, the United Kingdom, and many other nations.

Since 1972, the Bering Sea stock of bowhead whales has been the subject of special attention by the Scientific Committee of the International Whaling Commission. The entire bowhead whale section from each report of the Scientific Committee since 1972 is given below.

1972 Report in the Twenty-third Report of the Commission, page 34, issued from the Office of the Commission 1973:

"The Committee reviewed the scanty material on bowhead (Greenland right) whales in the Arctic. This included a paper by A. W. Mansfield (SC/24/17). It was agreed that the Committee ask the Commission to request Denmark, U.S., and U.S.S.R. to obtain information on the aboriginal kill of bowhead, gray, and other whales, and report this to the Bureau, if it is not now being done. The Committee also asks the Commission to urge the United States to take steps to reduce the waste due to lost whales of all species in its aboriginal fishery."

1973 Report in the Twenty-fourth Report of the Commission, page 47, issued from the Office of the Commission 1974:

"The Committee notes with pleasure the response of the countries concerned to last year's request by the Commission for data on the aboriginal take of bowhead and other whales in the Arctic. The take of bowhead whales in the Arctic in 1972 was 37, all by United States aborigines. One aboriginal association in Canada plans to regulate its take to one bowhead every two years. The United States stated it has not yet found a solution to the problem of the loss of whales in its aboriginal fishery. The Committee repeats its request to the Commission to urge the United States to continue to study the problem, and in addition to take steps to determine both the actual kill and the number of bowhead whales as well as the status of this stock in relation to the MSY level."

1974 Report in the Twenty-fifth Report of the Commission, page 72, issued from the Office of the Commission 1975:

"The Committee noted that the 1973 catch of bowhead whales by U.S. aboriginals was 37. Aron informed the Committee that the

information it requested last year is now being collected and would be made available before the next meeting. The Committee expresses its continuing concern on lack of information on the status of this stock, on the reported high loss rate and on the increase in catch in the last two seasons.

"The bowhead whale stocks in the Canadian Eastern Arctic appear to be smaller than off Alaska; however, the catch by Canadian aboriginals is very small. There is no positive evidence for any rebuilding of this stock (SC/26/35)."

Report and Papers of the Scientific Committee of the Commission 1975, page 13, issued from the Office of the Commission 1976:

"The Committee had available a report on studies on the bowhead whale in Alaska 1974 (SC/27/Doc). This included new information on the number of whales killed, killed but lost, and struck but lost. The size of the stock and its present condition are still unknown and the Committee recommends to the Commission that steps be taken to obtain better biological data

and also to minimize the loss rate with the aim of reducing total mortality. Catches of bowhead whales are recorded in logbooks and elsewhere in the records of earlier whaling for this species and they could provide information on past population levels. These sources should be examined to collate this information."

"Mitchell reported that he was collaborating in a study of information available from sightings and the literature on the numbers of this species in the Canadian Arctic. Elsewhere in the Arctic, two animals (one a calf) were sighted in summer 1973 by Norwegian whalers(SC/27/Rep 2) and remains of a stranded animal were found in 1974 on Barents Island (Svalbard) as reported in SC/27/Prog Rep 3."

1976 Report in the Twenty-seventh Report of the Commission, page 45, issued from the Office of the Commission 1977:

"The Committee had available reports on studies of bowhead whales in Alaska in 1975 (SC/28/Doc 16) and 1976 (SC/28 Prog Rep 11). They included new information on the numbers of whales killed, killed but

lost, and struck but lost. There was evidence for an increased effort. The initial size of the stock and its present condition are still unknown. The Committee most strongly urges that this situation be rectified and recommends:

- (1) a thorough examination of early whaling history including inspection of log books to provide information on past population levels;
- (2) marking studies to help assess mortality rates of struck but lost whales;
- (3) assessment of current population status;
- (4) collection and compilation of better information on sex, length, maturity, and age of captured whales.

"The Committee strongly recommends that necessary steps be taken to limit the expansion of the fishery and to reduce the loss rate of struck whales (without increasing total take). Effort may also be increasing in the Canadian Arctic with one bowhead recently taken and two other captures attempted (SC/28/Prog Rep 3)."

During the 1976 Plenary Session of the Commission a Resolution on bowhead whales was adopted. This

Resolution appears on page 33 in the Twenty-seventh Report of the Commission and is quoted below:

"THE INTERNATIONAL WHALING COMMISSION

Having noticed the evidence for an increased effort on bowhead whales in the North American Arctic which species generally is protected in all Oceans; concerned that the continued relatively high loss rate of struck whales in Alaska should be reduced (without increasing the total take);

noting the recommendations of the Scientific Committee to improve assessments of current population;

RECOMMENDS

That Contracting governments as early as possible take all feasible steps to limit the expansion of the fishery and to reduce the loss rate of struck whales."

During the 1977 meeting of the Scientific Committee a number of factors were taken into account before the Committee stated "that on biological grounds exploitation of this species (bowhead whales) must cease and recommends to the Commission that the words 'or right' in paragraph 7 of the Schedule be deleted." The following facts were considered:

1. Current Stock Size - The Scientific Committee concluded that present component of the Bering Sea stock affected by Eskimo hunting is about 1,000 whales, and that the upper limit would be no more than 1,200 to 1,600 whales.
2. Initial Stock Size - The initial population size of this stock may have numbered 11,700 in 1850 and probably was greater if adjustment is made for the residual stock (Mitchell, SC/29 Doc 33).
3. 1976 Catch Statistics - The number of bowhead whales landed during the 1976 season was 48, with 8 others killed but lost, and 35 others that were struck but lost (Marquette, SC/29/Doc 30; Tillman Verbal Report).
4. 1977 Catch Statistics - Preliminary data for the spring 1977 season which ended in late May was 26 whales landed, 2 killed but lost, and 77 struck but lost (Tillman Verbal Report).
5. Harvesting Risks - A particularly serious consequence of harvesting from this small stock at current levels is the attendant instability of the system in the face of environmental perturbations (such as potential pollution hazards associated with petroleum development in the North American Arctic). The problems were examined in detail (Beddington, SC/29/Doc 6). Problems are exacerbated when any stock is at a low level relative to its initial size.

6. IWC Protection Stock - A protection stock is a stock which is below 10 percent of MSY stock level. The MSY stock level of baleen whales is considered to be 60 percent of initial size. Total protection for baleen whales therefore begins when the stock is 54 percent or less of its initial size. The Bering Sea stock of bowhead whales is roughly, at best, only 10 percent of its initial size, and therefore is clearly within the protection category.

The 1977 spring hunt of bowhead whales resulted in 26 animals retrieved, compared with 36 in the spring of 1976. The percentage of whales struck but lost increased from about 50 percent in the 1973-1976 period to about 75 percent in the spring of 1977. The Scientific Committee considered this catch and lost rate to be too high for the minimum population estimate of about 1,000 animals and recommended that the Commission accept a proposal to remove the native exemption which allowed the taking of right whales (Appendix C). All 31 members of the Scientific Committee agreed with the recommendation, and the Commission adopted it by a vote of 16 to 0 with the United States abstaining. This action implies that the Commission interpreted the Convention as applying to native's subsistence whaling.

The U.S. Commissioner requested further information from the Scientific Committee as to why some level of subsistence taking above zero could not be permitted.

In response to this request by the U.S. Commissioner, the Scientific Committee reported that:

"The reduction of the bowhead whale to a small fraction of its initial population level poses two interrelated questions about the chances of survival of the species. In the absence of exploitation, environmental fluctuations will be expected over time to reduce the population below a critical level where extinction is likely. The smaller the population the higher the risk and the shorter the time to extinction. However, where the population is subject to exploitation this problem is considerably exacerbated; if a quota is set and at any time some natural disaster reduces the population to any degree, continued application of the quota will result in severe depletion and a correspondingly shorter time to extinction. This risk is only slightly reduced if an effort regulation is used. Accordingly there is a clear scientific case to be made for a moratorium on this species in the hope that it will recover to a somewhat safer level."

Domestic Legislation

The International Whaling Convention is implemented domestically by the Whaling Convention Act of 1949 (16 U.S.C. 916, et seq.) which provides that duly-approved and effective IWC regulations become effective for persons subject to U.S. jurisdiction upon their publication in the FEDERAL REGISTER, further action by Congress not being required. The Act furthermore authorizes

the enforcement of IWC provisions, as required by Article IX of that convention and the promulgation of regulations which may be necessary to carry out the purposes and objectives of the IWC, its schedule and the Act itself. (16 U.S.C. 916 c, 916 J).

Because bowhead whales are marine mammals also listed as endangered species, they are protected by both the Marine Mammal Protection Act of 1972 (16 U.S.C. 1371, et seq.) and the Endangered Species Act of 1973 (16 U.S.C. 1539, et seq.). While the prohibitions established by these Acts do not apply to Alaska natives taking marine mammals or endangered species in a non-wasteful manner for subsistence purposes or in order to perpetuate traditional native arts and crafts, regulations limiting such native take may be promulgated when the Secretary (of Commerce or of the Interior) determines that a marine mammal species is "depleted" or an endangered species is "materially and negatively" affected by the native take. Under each Act, any such regulations must be promulgated in accordance with Sec. 103 of the MMPA (16 U.S.C. 1313) which requires, inter alia, a formal hearing and publication of statements addressing such issues as the estimated existing level of the species concerned and the expected impact of the proposed regulations upon the species' optimum sustainable population. A proposed determination that bowhead whales have become a depleted species as defined in the Marine Mammal Protection Act was published in the FEDERAL REGISTER, June 10, 1977. The 30-day comment period

having expired, final determination of depleted status may be published at any time. Thereafter, the Secretary may prescribe regulations limiting the native take of bowhead whales. Should the U.S. decide to accept the IWC's zero-quota on the take of bowhead whales, implementing this prohibition through the Whaling Convention Act of 1949 would not necessarily conflict with the native exemptions found in the MMPA and ESA.

The natives exemptions provide:

"The provisions of this Act shall not apply with respect to the taking of any marine mammal by an Indian, Aleut, or Eskimo..." (Emphasis Added) Marine Mammal Protection Act of 1973 Sec. 101 (b), 16 U.S.C. Sec. 1371.

"Except as provided in paragraph (4)* of this subsection the provisions of this chapter shall not apply with respect to the taking of any endangered species or threatened species,... by (A) any Indian, Aleut, or Eskimo..." (Emphasis Added) Endangered Species Act of 1973, Sec. 11 (e) (1), 16 U.S.C. Sec. 1539 (e) (1).

These exemptions cannot be invoked to make other statutes (such as the Whaling Convention Act of 1949) inapplicable to native people.

Trust Responsibility to Natives

The trust responsibility to native people does not mandate that the U.S. object to the IWC zero-quota but would require that hardships occasioned by a decision to adopt the IWC regulation be minimized by Federal assistance.

This trust responsibility arises from treaties, executive orders, statutes or other agreements under which the U.S. has assumed an obligation to native people. See Gila River Pima - Maricopa Indian Community vs. U.S., 427 F2d 1199 (Ct. Ct. 1970).

Further, the Government has been authorized to provide funds and assistance encouraging the general welfare of native Americans:

"The Bureau of Indian Affairs, under the supervision of the Secretary of the Interior, shall direct, supervise, and expend such monies as Congress may from time to time appropriate, for the benefit, care, and assistance of the Indians throughout the United States for the following purposes:

General support and civilization, including education.

For relief of distress and conservation of health.

For industrial assistance and advancement and general administration of Indian property.

For extension, improvement, operation, and maintenance of existing Indian irrigation systems and for development of water supplies.

For the enlargement, extension, improvement, and repair of the buildings and grounds of existing plants and projects.

For the employment of inspectors, supervisors, superintendents, clerks, field matrons, farmers, physicians, Indian police, Indian judges, and other employees.

For the suppression of traffic in intoxicating liquor and deleterious drugs.

For the purchase of horse-drawn and motor-propelled passenger-carrying vehicles for official use.

And for general and incidental expenses in connection with the administration of Indian affairs." 25 U.S.C. 13 (1921)

While U.S. trust duties to Indians have not been diminished by virtue of recent legislation encouraging their independence (See Sec. 1, Alaska Native Claims to Settlement Act, 43 U.S.C. 1601 (c) (1971) and Section 110, Indian Self-Determination Act, 25 U.S.C. 950n (1975)), they cannot be expanded to exempt natives from requirements imposed by other statutes. Federal statutes of general applicability are binding upon native Americans unless there exists some treaty right which exempts the Indian from operation of such statute. See U.S. v. Three Winchester 30-30 Caliber Lever Action Carbines, 504 F2d 1288 (7th Cir. 1974); see also, F.P.C. v. Tuscarora Indian Nation, 362 U.S. 99 (1960), Tlingit and Haida Indians of Alaska v. U.S., 389 F2d 778 (Ct. Ct. 1968). Thus, in absence of an express treaty right, Alaska natives are subject to provisions of the Whaling Convention of 1949, as well as to those provisions of the Marine Mammal Protection Act and Endangered Species Act addressed specifically to natives.

Executive Policy

President Carter has expressed strong commitments to the conservation of whales and to the preservation of human rights. In his Environmental Message of May 23, 1977, President Carter discussed saving the whales:

"Sharing the worldwide public concern about the condition of marine mammals, especially whales, I have directed the Secretary of Commerce, with the foreign policy guidance of the Secretary of State to:

Prohibit commercial whaling within our 200-mile fishery zone;

Pursue negotiations within the International Whaling Commission for a stronger international conservation regime for whales and other cetacean affording protection for them throughout their range;

Maintain firm U.S. support for a ten-year worldwide moratorium on the commercial killing of whales; and

Report to me within 60 days any actions by other countries that have diminished the effectiveness of the International Whaling Commission's conservation program."

He has also made strong statements concerning human rights and the treatment of American Indians:

"I am deeply concerned with the present condition of American Indians, and believe there must be a greater sense of federal responsibility to meet our obligations to them. We must obey and implement our treaty obligations to the American Indians, and in so doing, I pledge an all-out effort to assist in the protection of their land, water and their civil rights.

As part of my reorganization of government, I will review and revise as necessary the federal laws relating to American Indians and the functions and purposes of the Bureau of Indian Affairs. The guiding principles of my review will be a strengthened reaffirmation of our legal and moral trust responsibilities to the American Indians, and a strong personal respect for the dignity of each of our first Americans.

(Pre-Convention Statement #92, available from Democratic National Committee.)

These executive policies must be considered in determining whether to object to or to adopt the IWC zero-quota on take of bowhead whales.

B. Biological Background

The bowhead whale, Balaena mysticetus, is a large balaenid cetacean having a very large head approximately one-third the length of the body. The animal derives its name from the highly arched shape of its mouth. The whale is black or dark gray in color, often marked with white on the chin and underside.

1. Distribution and Migration

The bowhead whale, also known as the Greenland whale, the Greenland right whale, the Arctic right whale, and the great polar whale, inhabits Arctic and Subarctic waters in four principal areas:

- (1) from Spitzbergen west to east Greenland;
- (2) in David Strait, Baffin Bay, Hudson Bay, and adjacent waters;
- (3) in the Bering, Chukchi, Beaufort, and East Siberian Seas; and
- (4) in the Okhotsk Sea.

Mitchell (1977) recognizes five stock areas, considering the Hudson Bay population to be isolated (after Ross, W.G. 1974. Distribution, migration, depletion of bowhead whales in Hudson Bay, 1860-1915. Arctic and Alpine Research 6(1):85-98).

The species is migratory, inhabiting the loose edge of the ice pack or sometimes open water and usually migrating with ice movements. At peak population the bowhead whale was considered circumpolar in distribution (Tomilin, 1957), retreating to the North Atlantic Ocean and Bering Sea only in winter.

The bowhead whale of the western Arctic inhabits waters extending from the Bering Sea in the winter, to the northern Chukchi and Beaufort Seas in the summer (Figure 1). The bowhead's spring migration route passes between St. Lawrence Island and the Chukchi Peninsula, through the Beaufort Sea to the Banks Island region and the MacKenzie River delta. Some may also migrate through the Bering Strait and then along the Siberian Coast. The peak spring migration period is from March through July (Braham and Krogman, 1977). In autumn, the whales migrate westward along the north coast of Alaska to the vicinity of Wrangel Island, where they turn southward along the coast of the USSR to the Bering Sea. During its spring migration, the bowhead is usually seen singly or in pairs, and often in the company of belugas or white whales (Delphinapterus leucas). During the autumn migration, bowhead whales are sometimes seen in groups containing up to 50 members.

2. Reproduction and Growth

The mating season, gestation, calving, and lactation periods are not well known for this species.

Marquette (1977) reports that mating and calving probably occur during April and May. Females are

believed to bear a single calf every second year, or less often (Durham, 1972).

The gestation period is uncertain. Scoresby (1820) believed gestation to last 9-10 months with birth occurring in February or March; Eschricht and Reinhardt (1866) reported gestation to last 13-14 months with birth occurring between late March and early May; Durham (1972) and Marquette (1977) conclude that the gestation period is about 12 months.

Length at birth is reported by Eschricht and Reinhardt (1866) to be from 396 to 427 cm (13 to 14 feet), by Bodfish (1936) to be 305 to 366 cm (10 to 12 feet), and by Scoresby (1820) to be 305 to 427 cm (10 to 14 feet).

The lactation period and the length of time a calf remains with its mother are unknown.

According to Durham (1972), sexual maturity in bowhead whales is reached at a length of about 38 feet for males and 40 feet for females. Adult bowhead attain a length of about 60 feet (18.3 m). Average and maximum longevity of bowhead whales is unknown.

3. Feeding Habits

The bowhead is a filter feeding whale whose mouth is equipped with plates of baleen. During feeding the whale strains zooplankton such as copepods, amphipods, and euphausiids through these numerous baleen plates. A review of the literature suggests that the total number of baleen plates in the bowhead can vary considerably, but averages about 600.

Bowheads appear to feed lightly during the spring migration and few stomachs examined at this time of year were found to contain food. During his 13-year study, Durham (1972) found some food in seven of ten stomachs examined during the spring which he identified as being green matter (like bile or digested phytoplankton), copepods, euphausiids, mysids, amphipods, gammarids, and two 12.7 cm (5 inch) long cottids. Johnson et al. (1966) examined three whales during the spring. The stomachs of these animals contained only a little food. Scoresby (1820) reported finding only "squillae" or shrimps in the mouth of one individual and in the few stomachs he was able to examine. Mitchell (1974) states that bowheads feed on mysids and various other small to medium sized zooplankton and notes various sources that indicate bowheads are sometimes bottom-feeders and eat amphipods.

Some food has been found in the stomachs of whales taken during the autumn hunt. Durham (1972) examined the stomachs of 7 whales, of which 6 contained mysids, gammarids, green matter, amphipods, some bone fragments of small fish, mud dwelling tunicates, vegetation, silt, and a few small pebbles. Durham believed that bowheads feed sporadically and lightly during their migrations in spring and autumn, and Johnson, et al. (1966) concluded that bowheads do little feeding while migrating.

4. Strandings

Strandings of bowhead whales on arctic shores apparently are infrequent. Durham (1973) reported the only stranding that he knew about occurred in September 1964, near Barter Island. Sergeant and Hoek (1974) state that strandings rarely occur along Canadian shores and that those they know of are the cumulative results of many years.

5. Ecological Problems

Petroleum development in the North American Arctic poses a potential pollution hazard to the species. In the spring whales migrate in leads (open corridors in the ice) where they are susceptible to environmental contaminants. Additionally, the north-slope oil

project might disrupt full concentrations of bowhead whales should steamer and barge traffic increase.

6. Population

(a) Present population

The size of the bowhead whale population in the Bering Sea and western Arctic Ocean is unknown. On the basis of counts of migrating whales made from ice stations near Barrow, Braham and Krogman (1977) estimated that about 800 whales passed in the near-shore lead between 25 April and 2 June, 1976. This is not a complete population estimate because some whales migrated before and after the period of study, and an unknown number migrated in offshore leads and along the Siberian coast. Aerial surveys do not indicate the presence of many whales in offshore leads, and no estimate is available of the number migrating along the Soviet coast. During the period 23 April through 3 June 1977, about 867 whales migrated past the ice stations near Barrow (unpublished NMFS data). Thus, a minimum estimate for this bowhead whale population is near 850 animals, and the total population depends on the number which migrate before and after the period when it is safe to be on the ice, and the migration in offshore leads and along the Siberian coast.

The IWC Scientific Committee decided that the most likely estimate of the component of the bowhead stock affected by Eskimo hunting is 1,000 animals, This estimate is based on data supplied by NMFS observers. Although the data base on this population is weak it is perhaps comparable to that used to justify regulation of other whale species. The U. S. IWC Commissioner states that: "Within the Commission, and certainly within the United States, there has been a basic policy established that our actions will be conservative and in direct proportion to our ignorance of any species." (p. 174 Washington Hearing Testimony)

(b) Initial stock size

Two authors, Rice (1974) and Mitchell (1977), based on analysis of historic commercial whaling records, have attempted estimates of the original population size of bowheads in the western Arctic near or at the beginning of exploitation. Utilizing information on annual average whalebone production, Rice (1974) estimated the population as around 4,000 or 5,000 during the period 1868-1884 which he assumed to be the period of peak exploitation. Mitchell (1977) and Braham and Krogman (1977) independently concluded that the peak years of exploitation were during 1851-1860. Thus, the initial stock size was probably greater than the 4,000-

5,000 of Rice.

Document 33, by Mitchell, presented to the 29th Annual Meeting of the IWC, provided an estimate of initial stock size which was based upon catch rate data from Townsend (1935). The average catch rate of 8.1 bowhead whales per ship, per year, obtained from Townsend (1935) assumes that his data represent an unbiased sample of American whaling voyages during 1851-1870. Only a full study of logbooks could test this assumption, and until such a study is completed, Mitchell's assumption does not seem unreasonable. This catch rate was then multiplied by the annual effort (number of ships) participating each year in the bowhead fishery. Effort was calculated as 57 percent of the total number of American and foreign vessels whaling in the North Pacific. Mitchell presents reasonable arguments for regarding 57 percent as a minimum.

Summing results over the period 1851-60 is a reasonable cumulative catch procedure and gave a value of 8,852 whales taken over 10 years. A minimum estimate of abundance would then be obtained if some correction for losses were applied. Mitchell's use of 24 percent of the number killed and captured as being the number lost seems somewhat low, but his assumption that all of these

die would appear to compensate as he suggested. His corrected cumulative catch estimate of 11,647 ($8,852/.76$) consequently seemed reasonable to the Scientific Committee of the IWC.

However, several members of the Scientific Committee of the IWC disagreed with Mitchell's method of adding in a factor for "residual stock." The procedure he used is not clear. If his value of 18,000 comes from adding in the estimated cumulative catches adjusted for losses in the succeeding two decades (1871-1890), then he has added in some new animals produced after exploitation started. NMFS scientists believe that a better correction would have been to adjust his cumulative catch estimate for natural mortality which gives an initial population size of 12,260, assuming a 5 percent natural mortality rate.

C. Description of the Harvests

1. Bowhead Harvest by Foreign Natives in the Western Arctic

The only known harvest of bowhead whales in the western Arctic other than by Alaskan Eskimos is a limited subsistence take for Soviet Eskimos. Sergeant and Hoek (1974) report that bowheads are not hunted in the eastern Beaufort Sea by Canadian Eskimos.

Little information is available on the kill of bowheads by Soviet Eskimos. Zenkovich (1938) reports that Eskimos of Chukchi Peninsula in particular hunt bowhead whales, though they catch no more than 10 tons each year. Geller (1957) claims that Soviet Eskimos catch mostly young whales weighing 4-5 tons. Tomillin (1957) writes "In the best years, up to 10 whales (including rorquals) are still (exact year not known--assumed to be at least 1955, the date of the most recent literature citation used by him) killed at the Chukchi Peninsula, mainly in the village of Sireniki, Chaplino, Intuk, Naukan, and Uellen." In that area, the autumn rather than the spring hunt is more rewarding, according to Tomilin. Zimushko (1969) states that bowheads are taken rarely by Eskimos of the Chukchi Peninsula. Mineev (pers. comm.), provided data showing that in recent years the Soviet take has been about two whales per year (Table 1). However, no whales were taken for Soviet Eskimos in 1976.

2. Bowhead Harvest by Alaska Eskimos

The hunting of bowhead whales has been a vital part of culture and subsistence lifestyle of Eskimos for centuries. Hunting occurs in U.S. waters during the periods of the spring and fall migrations as the bowhead whales move north and east through near shore leads in the spring and then west and south as ice forms in the fall. Residents of the nine villages of

Barrow, Point Hope, Wainwright, Gambell, Savoonga, Kivalina, Nuiqsut, and Kaktovik, participate in one or both of the semi-annual hunts.

(a) Eskimo hunts affected by this action

The fall 1977 bowhead whale hunt is not affected by this action. If the U.S. does not object to the IWC action, the 1978 spring bowhead whale hunt may not occur. Spring hunting usually occurs at the villages of Barrow, Point Hope, Wainwright, Gambell, Savoonga, Kivalina, and Wales. Ice conditions east of Barrow do not permit hunting during the spring whale migration by the villages of Nuiqsut or Kaktovik, and, therefore, residents of these villages will not be directly affected by this action in 1977.

(b) Hunting techniques

The hunting of bowhead whales as part of Eskimo life is believed to date back several thousand years. Written information and documentation of historical aboriginal whaling is scarce. It is known, however, that whales were traditionally taken with harpoons and lances fashioned from stone, ivory, and bone. Skin covered whaling vessels known as umiaks were traditionally used, and remain the most commonly used vessel.

The method Alaskan Eskimos presently use to take whales has evolved from traditional methods, adopted to gear and techniques introduced by commercial whalers in the last century. Eskimos gained experience in the use of darting and shoulder guns during the era of commercial whaling when they were frequently employed by commercial whalers to assist in the commercial hunts. After commercial whaling ceased, they continued to use these and incorporated them into the traditional village hunts. The design of these weapons and the state of technology have not changed substantially since the peak of the

commercial whaling era.

The most recent description of the development of current Eskimo whaling methods is that of Durham (1974). A detailed description of whaling methods and equipment employed in the hunt is found in the report by Fiscus and Marquette (1975).

(c) Extent of the hunt

The extent of Eskimo bowhead whale hunting prior to the advent of commercial whaling is not known. Estimates of past annual catches are based on conversations with the natives and scattered literature, since historically written records of whaling activities were not kept.

Table 2 provides data on the number of bowheads taken by Alaskan Eskimos and shore based stations in the western Arctic Ocean for the period 1852 through spring 1977. These data are from Marquette (1977) except for the spring harvest information in 1977 which was added from information compiled by NMFS biologists in 1977. As indicated in Figure 2, in recent years there has been a significant increase in the annual native take of bowheads.

The annual Alaskan bowhead harvest averaged an estimated 10 from 1946-1970, but rose to an annual average of 29 for the 1970-1976 period. In 1976, 48 bowheads were landed. Spring harvest data for 1977, totaled 26 bowheads killed and landed, 2 killed and retrieved but lost (not landed) and 77 struck but not retrieved or landed. (See Table 5).

This increased native kill is a cause for concern when the numbers of whales which are killed but lost and those which are struck, lost, and which may subsequently die are also taken into account.

Given a "best" estimate of 1,000 for present population subject to Eskimo harvest hunting mortality results in the average removal of about 5 percent per year in recent seasons (Appendix C, Scientific Committee Report). Since the maximum net recruitment ability of baleen whales is thought to be on the order of only 4-5 percent per year, it is not likely that the bowhead whale population would be capable of increasing its numbers in recent years given the estimated removal rate (Tillman, pers. com.).

(d) Factors possibly contributing to increased annual take

Several factors are probably responsible for the increased hunting effort for bowhead whales by Alaskan Eskimos in recent years. A discussion of these factors follows:

1. Increase in the native population

The first recorded population information for most of the Eskimo villages was obtained through the 1950 census (Table 4). The village of Nuiqsut was recently established and the population information is available only for 1976.

Since 1950, the Eskimo population of these villages has more than doubled. Growth has varied somewhat from village to village, but the trend has been one of steady increase. Their total population (excluding Nuiqsut) was 2,048 in 1950, and 2,661 in 1960, showing a 30 percent increase. The 1970 census indicates a population of 3,711, up nearly 40 percent from 1960, and up 81.2 percent from 1950. The data for 1976 show a further rise to 4,211 persons (excluding the Nuiqsut population), up 13.5 percent from 1970, and slightly more than double the village populations of 1950.

This growth pattern is a likely contributor to the increased Eskimo effort in the bowhead whale hunt, which in turn has resulted in an increased take.

2. Number of whaling crews

The status of whaling captains traditionally carries a great deal of prestige and provides a strong indicator of community leadership. Although some captains inherited their equipment, this status was normally established and maintained by a combination of skill, intelligence, energy, and astute business ability.

The intrusion of western society, including the introduction of the cash economy, western education, and passage of the Alaska Native Claims Settlement Act, has to some extent affected the means of attaining status. There has been an increased availability of cash and consequently an improved ability to purchase boats and other equipment which has contributed significantly to the establishment of new Eskimo whaling crews (Table 3).

The increased number of crews contributes to an increasing number of whales killed. Crews with less experience may have a higher number of whales struck and lost.

3. Abundance of the species

Some investigators have speculated that the bowhead population may have been increasing subsequent to commercial exploitation, however, NMFS data are insufficient to be indicative. The increased kill may, in part, be due to an increase in the number of whales coupled with the increase in Eskimo whaling effort.

4. Weather conditions

Weather conditions are known to affect the number of whales taken. Whaling is conducted under severe Arctic environmental conditions which are capable of directly affecting success in the hunt. If leads open further offshore, a majority of the whales may follow a route inaccessible to the whalers. However, constantly moving ice often closes the lead and presents considerable danger to the crews. Camps and equipment must frequently and quickly be moved to shore to prevent their loss to crushing ice. Strong offshore winds may also affect the length of stay at a camp site, as well as create poor visibility and dangerous water conditions unsuitable to native whaling. Occasional fog and snowstorms also reduce observations and present considerable risk to crews in pursuit of whales.

These conditions are primarily responsible for a variable number of crews actually engaged in whaling from day to day. The extremely severe ice conditions of 1975 (Barnett, 1976) resulted in a reduced kill (Table 5). Similarly, the particularly favorable weather conditions in the autumn of 1976 are thought to have contributed to the record autumn kill, which was the highest retrieved kill in any autumn hunt on record.

(e) Struck-loss ratio

Frequently whales are struck with a darting gun or by a bomb fired from a shoulder gun, but are not killed and recovered.

Table 6 provides data on the number of bowheads that were struck and lost compared to those killed and recovered for various years from 1915 to 1962 at Point Hope, Alaska. (Foote, personal communication 1964).

Similar data are given for the 1973-1977 period for all Alaska (Table 5). Ms. Rosita Worl, Ph.D. candidate in Social Anthropology, stated at the Washington Hearings that the numbers of struck and lost whales has been inflated. Referring to reporting techniques adopted by NMFS she stated: "They do not distinguish between those whales which are struck more than once and are subsequently taken. Conceivably under the present methods National Marine Fisheries can report three separate strikes and losses of the same whale that may in actuality be taken by a fourth crew."^{1/} According to Dr. Michael Tillman, NMFS, and IWC Scientific Committee member, the number killed and recovered each season is based upon actual counts. However, the numbers killed but lost, and struck but lost, are based upon interviews with Eskimo hunters. Consequently, these data may underreport the numbers killed but lost, and struck but lost.^{2/} The evaluation of data on wounded and unretrieved whales is difficult because it is not known how many of these animals may have died. Various estimates of the number of whales struck and lost compared to the number killed and retrieved have been made. Johnson, et al., (1966) wrote that even when struck the whales are only retrieved about 25 percent of the time. Durham (1974) states that only about one in four or five whales struck is recovered. However, statistics gathered by Foote (Pers. comm.) for various years and from various sources show that at Point Hope 37 bowheads were struck and lost compared to 36 killed and retrieved (Table 6), indicating that 50 percent of all whales struck were lost. Scott (1951) reported that up to 50 percent of all whales hit are not

^{1/} P. 29 Washington Hearing

^{2/} Appendix D, p. 4

recovered, primarily because of poor equipment. NMFS data from 1973-1976 yield similar findings. A total of 112 whales (48 percent) was known to have been lost (99 struck and unretrieved and 13 killed and unretrieved) compared to 120 that were killed and recovered. It is difficult to obtain exact figures on this subject because most are obtained from statements made by the whalers, which may account for the wide range of figures reported for whales that have been struck and lost. Early commercial whalers perfected their technique to where they recovered an average 67 percent or greater of all whales struck, according to Bodfish (1936) who on one occasion harpooned 16 whales, losing only four. Scammon (1874) stated that only 20 percent of all whales struck are lost. Although it is doubtful that the rate at which the Eskimos strike and lose whales approaches that of early professional whalers, a 50 percent loss rate may be assumed to be reasonable because of the subsistence value and prestige gained by landing a whale. Of concern, however, is the substantial increase in the percentage of whales reported as struck and lost in the 1977 spring harvest (Table 5).

An observed change in whaling methodology, particularly at Barrow, may have resulted in an increase in the number of whales being struck but lost. Traditionally a whale is first struck by a darting gun which fires a bomb into the animal and implants a harpoon with attached line and float. If a second bomb is necessary, it is usually fired almost immediately from another darting gun, but without attached harpoon. If more bombs are needed to kill the whale, or if it is not safe for the boat to approach the wounded animal, than a shoulder gun is used. Considerable skill and courage are required to employ the darting gun, and recent observations indicate that whales are now often struck first with bombs fired from shoulder guns. Even an injured whale unimpeded by a harpoon with

attached line and float, can frequently elude its pursuers. This practice results in numerous whales being struck but unretrieved.

At the 1977 IWC meeting the Scientific Committee adjusted the number of whales known to have been killed for the period 1973-1977 to take into account whales struck which subsequently died. The numbers of whales struck that die from their wounds is not known and can only be estimated. Some bombs fired into whales fail to explode, and others pass through the body and explode in the water. Several observations of the NMFS ice crew based at Point Barrow indicated that bombs did not explode in about half of the 56 whales struck and not retrieved during the spring 1977 hunt. The best judgment of the Scientific Committee was that 50% of the struck and lost animals subsequently died, and this percentage was used in calculating an average removal rate of 5 percent caused by hunting for the period 1973-1977.

Several factors contribute to the problem of striking but not recovering whales, of which the most important may be failure of the bomb to explode after it enters the whale. Redesigning of the bomb and its component parts with ease and safety in assembly under rigorous field conditions in mind, may prevent loss of some struck whales.

3. Commercial Harvest

By the 1840's an abundant stock of bowheads had been discovered in the Okhotsk Sea, waters of eastern Siberia, and along the Kamchatka coast. In 1848, commercial whaling for bowheads began in the Bering Strait and western Arctic. The commercial catch in 1880, 1885, and 1886 was 265, 220, and 153

whales (Clark, 1887), for an average harvest of about 200 animals a year.

The last reported whaling voyage to the western Arctic occurred in 1916 (Bower and Aller, 1917) when the steamer Herman and the auxiliary whaling schooner Belvedere sailed north in the spring, from San Francisco and Seattle, respectively, returning that autumn with some whale products. Some of the arctic Alaskan trading companies continued to deal in whalebone for a few more years into the early 1920's, but by the mid 1920's commercial bowhead whaling had ended.

D. The Relationship of the Whale to Eskimo Life

1. Eskimo Life Style in Relation to the Whale

Alaskan Eskimos have a unique lifestyle which blends many aspects of participation in modern life with traditional elements, providing continuity with the earliest periods of their economically and culturally self-contained village subsistence life. Whaling remains a central subsistence activity which, as the most important of these traditional elements, provides the medium for weaving contacts with modern life into the traditional pattern of the Eskimo existence.

Subsistence activity, including whaling, is both the most necessary and time-consuming aspect of Eskimo life, generally accounting for 6 to 8 months of family work on a yearly basis. Hunting (whale, walrus, seal, migratory birds, rabbit, and occasionally polar bear), fishing, and berry picking, account for half, and generally more, of the family food for seventy percent of the Eskimo population, and is considered by natives to be the most important of the "old ways" which need to be passed on to children.

Whaling is a particularly important subsistence activity in the seven villages which participate in both the bowhead hunts. It provides an important food source particularly in villages such as Point Hope and plays a substantial role in determining village social and political organization.

2. Utilization of the Whale

As with other subsistence food sources, the Eskimo utilizes most of the whale, but the meat and muktuk (layer of blubber with skin attached) are the most important. Additionally, baleen, gum tissue (mamaak),

flukes, flippers, brain, tongue, small intestine, heart, kidneys, epithelium of the liver, the tympanic bullae, and frequently stomachs are utilized (Carroll, 1976). Some of the blubber formerly used as dog food, is now discarded.

Durham (in press) states that Eskimos relish the flesh of very young bowheads, even near-term fetuses, and that their muktuk is particularly prized because of the double layer of skin that is characteristic of these animals.

Marquette (1977) describes some aspects of native utilization during the 1976 harvest as follows: "The whales were pulled from the water when possible by means of a block and tackle and then butchered. Thin ice required partial butchering of the animal before it could be hauled from the water, a situation that greatly increased the time spent on this aspect of whaling. Accordingly, the butchering process required from as few as 3 to as many as 30 hours. Parts removed from the animal were taken ashore as soon as possible to prevent loss when the ice shifted."

"Most of the meat, muktuk, and blubber was removed from the butchering site immediately after the whale was cut up. Occasionally, however, several days elapsed before all parties hauled off their shares."

"Remains of the backbone, some ribs, and internal organs, occasionally excess blubber, and the skull (at Barrow) were generally left on the site. Usually, fewer parts of the whale were left on the ice at Point Hope than at Barrow. At Point Hope, the skull was returned to the sea after the tympanic bullae and lower jawbones were removed, and the latter were taken

to the village. At Barrow, the skull (tympanic bullae removed), including jawbones, was usually left at the butchering site. At some butchering sites, mostly at Barrow, blubber was left on the ice."

The distribution of the whale parts to groups and individuals is listed in Table 7, and may differ somewhat from village to village, for example, between Point Hope and Barrow. Although most products are consumed by the village members, some meat and muktuk are used in trade, and up to 10,000 Eskimos and Indians not directly associated with the whaling event (those living in the interior) supplement their diets with whale meat (Davidson, 1972) and other marine mammal parts. Many parts are distributed through the village where the whale was taken via the various crews and their families that participated in the season's hunt. All whaling crews share in the spoils of a kill even if they did not take an active role. The villagers, collectively, share in the meat and muktuk saved for the spring and fall festivals-feasts, as well as that saved for Thanksgiving and Christmas.

3. Factors of Village Life Affected by the Whale Hunt

There are several closely interrelated areas which indicate the role of whaling to Eskimo village life.

These include:

- a. Diet and health;
- b. The physical activity and environment associated with the hunt;
- c. Village social and political structure;
- d. Village economy;
- e. The Eskimo relationship to the non-native world.

The bowhead plays a consistently important, but varying role within each of the seven villages which regularly participate in the spring hunt.

a. Diet and health

Specific information regarding the quantity of consumption and extent of importance of whalemeat in the average Eskimo daily diet is not available as diet records have not been developed. However, it is known to be about the most important food source in the village of Point Hope (IHS-Alaska Nutrition, 1977). It may be less important in Barrow, where fresh meat, fruit and vegetable substitutes are more readily available through stores which have better access to city supply centers. The other villages do not have as many or as frequently supplied stores in their areas and also rely less on "cash economy," which, in Barrow, makes the possibility of substituting these foods somewhat more feasible. However, this will not necessarily resolve the problem of supplying acceptable foods.

As a food source, whalemeat is particularly important in the seasonal diet cycle of these villages. The bowhead is the central food source during the seasons it is hunted. During the other seasons, frozen or dried muktuk and meat will be eaten, but another food being harvested during that season may replace it as the single most important food at that time.

Even if a village does not kill a whale, successful whaling villages share their meat and muktuk, so that it is rare for any village to be without the bowhead as an important food source for that year. For example, the village of Kivalina may not take a whale for 3 or 4 years, but the nearby village of Point Hope shares its kill with Kivalina. Very often,

young men from Kivalina will also participate on Point Hope whaling crews assuring that the continuity of annual village effort in spring whaling activities is unbroken. (Interview with Kivalina whaling captain, 1977.)

However, the total number of whales landed and available to all native villages has been near zero in some years, presumably mostly as a result of weather and ice conditions. As indicated in Table 2, the total number of whales available to all villages was five in 1948 and 1949, four in 1954, five in 1956, three in 1957, two in 1958, one in 1959, and four in 1967.

Perhaps the most difficult problem to overcome in an effort to identify an acceptable alternate food source is the strong preference for the traditional foods of the culture. An improvement in the availability of beef, for example, may not make it palatable to an Eskimo unaccustomed to its very different taste. Unless the alternate food source meets the practical requirement of being one which will be eaten by those families who rely most heavily on subsistence work for their food, avoiding the physical, psychological, or cultural trauma which accompanies any drastic and forced diet change, it will not serve as an acceptable substitute.

From a nutritional point of view, the meat, muktuk (skin with some fat), and the oil of the bowhead are considered most important contributors to the Eskimo diet. Three ounces of whale meat provide about one-half of the recommended dietary allowance of protein for an average man, 140 percent of the iron, and 50 percent of the riboflavin. Whale oil is a very high source of vitamine A; three ounces of whale oil

provide one-half the vitamin A daily recommendation. Whale products also provide major sources of vitamins B and D. Muktuk is high in the fat which is necessary to the Eskimo diet. A three ounce portion of muktuk provides about 20 percent of a man's daily caloric needs. It provides essential fatty acids which are a concentrated source of energy, hunger-satisfying, and necessary to balance the Eskimo diet. The meat provides a major protein source as well as essential iron.

Iron from bowhead meat is particularly important to the diet of these villages since there is a high rate of iron deficiency anemia (IHS-Alaska Nutrition, 1977). Bowhead whale as an oil and fat source is similarly important. When bowhead whale has not been available, and particularly in those areas where walrus or other large animals are less available or their hunt severely restricted, subsistence hunting concentrates on animals such as rabbit for survival. The high protein diet without fatty acids, which results from this diet change, puts excessive pressure on the kidneys, causing health problems. It is also the cause of deaths which in the past have been labelled, "rabbit starvation" (IHS-Alaska Nutrition, 1977). Any substitute diet provided to make up for the nutritional role of bowhead whales will necessarily have to take these factors into account.

Other diet and health considerations evoked by the role of the bowhead whale include the physical activity associated with the whale hunt. This activity involves a high percentage of the entire Eskimo village. The extent of physical activity in relation to the normal diet is an important control of obesity which occurs when the calorie intake is not reduced in corresponding amounts to the reduction

in physical activity. This, plus an increased dependence upon commercially supplied foods which include snack foods, are believed to contribute significantly to the increasing incidence of diabetes which is prevalent among native communities that interact more extensively with non-native culture. Obesity is also a known cause of heart disease, and other illnesses which occur more frequently among the native Alaska population (BIA Report, 1977). Therefore, the increase in reliance upon the cash economy as a food supply source presents a potential health hazard unless acceptable alternate physical activity and nutritionally and taste adequate food substitutes are provided.

b. The physical activity and environment associated with the whale hunt

In the seven communities which regularly participate in the spring hunt for bowheads, there was a total of about 86 active whaling crews in 1976. Assuming an average of eight men per crew, this means that there were at least 688 active male participants in the hunt itself in that year.

In addition to direct hunting activities by the men, virtually the entire village participates in activities related to the hunt. In the small and medium-sized villages, nearly everyone moves to the ice camp. In large villages, a substantial part of the village makes this move:

Activities include bringing in the whale, butchering, dividing, drying or otherwise processing it, storing the bone and baleen and other products used in ceremonial or other activities, cooking for the crew and other village members, watching the ice and weather, and watching for whales. Depending on the weather,

the camp may move from the ice to shore and back several times during the season.

Ice camps are generally maintained four or five weeks during the spring, while the whales are passing. However, equipment is often gathered and repaired for three or four months prior to the hunt, and for four to eight weeks before the camps are set up a considerable amount of effort is spent in getting the boats ready for the hunt. The spring hunt accounts for a considerable portion of the annual subsistence activity.

The physical environment of the Eskimo is harsh. Consequently, the area has an extremely low population density and social contact level. Personality traits and patterns of social organization have evolved which characterize Eskimo adaption to this environment. Cultural values represented by extensive cooperation, sharing, and skill in utilizing the environment for food and shelter are major components of this social patterning. An array of behaviors and actions which serve the purpose of avoiding conflict among individuals in the social group are significant aspects of the personality traits common to the Eskimo population (Nelson, 1969; Lantis, 1960; Gubser, 1965). These values and traits characterize Eskimo living and harmony with the physical environment, but they have also been a cause of stress and conflict due to misunderstandings between the Eskimo and the non-native world.

c. Village social and political structure

Whaling plays a strong cultural role within the Eskimo villages engaging in the bowhead whale hunt. The Eskimos of these villages identify themselves as

whalers. It is considered the most important activity because it ties the entire community together. Village feasts and festivals, arts and religious items revolve around the spring hunt and its products. The political and social organization of the village is closely related to the whale hunt.

Village identity develops from this interrelationship and, in this sense, the activities of the hunt are a strong stabilizing factor of Eskimo life.

A strong aspect of cultural identity, as a separate economic system, involves the manner in which sharing is carried out. When a whale is killed, an intricate and traditional pattern of distribution is implemented. This distribution reflects factors including the order of vessels striking and killing the animal, status on the vessel, family relationships, family and social networks extending into other northwest Alaska villages, and extent of need in some cases. These family and social networks provide a mechanism for sharing, trading, and fulfilling other social obligations. Historically, the physical environment has both limited these interactions and made them necessary to ensure the survival and economic and social viability of family units (Burch, 1975). This system assures that a family or village will be assisted through a season when game is scarce or other difficulties arise.

The products of whaling contribute also to the interweaving of the cash and subsistence economics. Whale meat and muktuk from the bowhead harvest constitute a traditionally primary subsistence foodstuff of those villages which, because of the subsistence activity relationship to the Eskimo view of their existence,

cannot be translated into cash values. There is occasional bartering of whale meat outside of the traditional pattern of sharing. Sales of art and ceremonial items made from baleen and bone of the bowhead, contribute to the available cash supply. The production and sale of such items contributed 10-15 percent of the \$500,000 wholesale cash value of native arts and crafts products in 1970 (Davidson, 1972). Much of the social and political organization of these native communities has traditionally centered around the whale hunt leader, or unmealiq. His power and prestige in the community enabled him to amass the wealth necessary to provide the material objects integral to the hunt. This ability, combined with his prowess in the hunt and the personal alliances which he formed with other hunters in the community, in turn enhanced his power and prestige. In this manner whaling contributed significantly to the maintenance of the political power structures within the community, and even today outsiders must work within these structures in dealing with these communities.

d. Village economy

The economy of the affected Eskimo villages is still mostly a subsistence one. In most of the seven villages engaged in spring bowhead hunting, about 70 percent of the families obtain most of their food this way. Even in larger villages, such as Barrow, 60 percent of the families obtain at least half their food from subsistence activity (BIA Report, 1977).

Unemployment in cash economy terms is very high. Only about 40 percent of the eligible adult native population in the entire State is in the labor force and, among those, unemployment averaged 20 percent in 1970 (BIA Report, 1977). This situation is more

severe in the rural regions which include the bowhead whaling villages. This is attributed to the acute shortage of suitable jobs in village Alaska, and has resulted in some seasonal migration of younger village members into urban centers such as Fairbanks and Anchorage in the search for jobs during periods when subsistence activity is light. Most Eskimos, however, are hesitant to leave their village for the uncertainties of the search for work, for which, in many cases, they are at a competitive disadvantage (BIA Report, 1977).

The State of Alaska and the BIA each have employment assistance programs available to native Alaskans. However, the lack of employment opportunity at places and times consistent with the organization and sustenance of village life, substantially reduces their effectiveness and turns them into essentially relocation programs. While BIA has a policy of training and placement for jobs near the reservation or community, it can only be minimally applied in Alaska because both the jobs and the training institutions are concentrated in a few urban places (BIA Report, 1977).

There are also several income services programs available to Alaska natives, including these Eskimo villages. However, the only one which has the capacity to take into account the subsistence life style of the Eskimo is the BIA Social Services Program. This program gives three types of relief: winter relief in the villages; relief to urban migrants, and relief for unemployed persons. However, it is a short-term assistance program which provides miscellaneous costs over an average one-month period per case. It does not address chronic income insufficiency caused

by declining subsistence resources and the lack of jobs in rural areas (BIA Report, 1977). Public assistance is also available, although requirements for eligibility are very restrictive (BIA Report, 1977).

Lacking employment opportunities in the villages, however, and considering the Eskimo satisfaction with the subsistence life style, it may be expected that these villages' economies will remain basically subsistence economies.

e. Eskimo relationship to the non-native world

The Eskimos are InnuIt people, closely related to the InnuIt population of Canada, Greenland, Scandinavia, and the U.S.S.R. They regard their existence as a special relationship with the animals which have traditionally shared the harsh environment in which they live. While there is considerable understanding of the need to communicate and build workable relationships with the non-native world, and while some aspects of the non-native culture and economy can and have been integrated into the Eskimo life style, there is strong resistance to change from a basically subsistence life to the non-native cash economy world. This is expressed even by young Eskimos participating in the seasonal migration from urban employment centers to the villages during periods of intense subsistence work (BIA Report, 1977).

Because whaling is seasonal, it is an activity particularly suited to the pattern of intra-yearly migration. These visits allow the migrants to participate in social and cultural practices and rituals which are important to both the maintenance of the native community and relief from acculturative

pressures placed on the migrants in their non-native environments. Many of these rituals, such as the activity of the "men's houses" (qualigi, karigi, etc.) are connected with the whale hunt (Spencer, 1971; Van Stone, 1962).

This migration and new source of cash wages also has effects on the structure of crews, and in turn on the community socio-political structures. Younger men need not depend solely on their prestige and alliances to obtain the materials needed for the whale hunt. Rather, their cash income from their outside job enables them to obtain these materials, and may be a contributing factor to the number of less experienced whaling skippers and umiak owners of the past several years. This new source of economic power also affects the political power structure within the communities, changing to some extent the way in which outsiders relate with these communities.

Many of the most severe personal and social problems encountered by native Alaskan communities and their inhabitants in recent years are related to their contact with non-native socio-political and economic systems. Personality disorders, social deviancy problems such as juvenile delinquency and violent behavior, and physical health problems such as alcohol abuse are all documented in native Alaskan populations. Many of these are directly related to the physical proximity and extent of contact with non-native military, industrial, or commercial development. The native's relative lack of English language ability, education, and occupational skills, the problems of individuals interacting with non-native cultures where the values of individuality and overt emotional and verbal expression run counter to his or

socialization in the village, and active discrimination on the part of non-native employers and others towards native Alaskans, all contribute toward problems in bridging the cultural differences (Chance, 1966; Honigmann, 1965; Foulks, 1972).

The Eskimo view of existence as coextensive with the land and animal life of the arctic environment is sufficiently different from the non-native perspective of the world to provide a cause of strain in Eskimo non-native relationships. In an effort to buffer the impact of the non-native world, there has been an increasing effort toward higher education and broadening of technical level contact of young Eskimos with non-native institutions. This has improved Eskimo understanding of the outside world and created a political astuteness focused on protection of Eskimo communities and life style. These phenomena have accelerated in response to the Alaska Native Claims Settlement Act and resource development in the Arctic region. Politically-oriented Eskimo organizations such as the North Slope Borough have contributed significantly to the political and economic solidarity of Eskimo communities as well as the broadening of village economies. The combination of political sophistication and strikingly different cultural perspectives on life has introduced factors which, in many cases, have strained the relationships between the village communities and governmental and industrial entities which are active in north and northwest Alaska. To the extent that these factors have altered village political structures by moving the educated young forward as the eyes, ears, and voice of the community, they

complicate the manner of interaction by non-natives and demand increasing cooperation with the villages in implementing non-native activities and responsibilities in the region.

III. ENVIRONMENTAL IMPACT OF ALTERNATIVE ACTIONS

A. If the U.S. Does not Object

1. Impact on the Bowhead Whale

The size of the recent harvest (including those struck but lost which may subsequently die) is such that it meets or exceeds the maximum net recruitment to the bowhead population. Consequently, it is unlikely that this endangered species would be capable of increasing its numbers under the present harvesting regime, and the population would perhaps decrease further toward extinction. This action will allow for its more rapid recovery, if recovery from an endangered status is still possible.

2. Impact on Other Species

The removal of bowhead whales from the coastal economy would result in some shift of subsistence hunting pressures to other species of marine mammals, land mammals, fish and waterfowl. Additional sources of fish are in low abundance so this shift in exploitation will, by necessity, be directed towards marine mammals. The extent of hunting pressure on other marine mammals which would result from a zero quota in the spring of 1978 cannot be accurately predicted.

Beluga will be subjected to an intensified hunt by the Arctic Eskimos. The beluga take by bowhead whalers has been low in the past. The two species migrate together and whaling effort expended on bowheads offered much greater rewards than that offered by the beluga. Furthermore, beluga generally sink when shot and considerable effort is required to recover them. They are, however, prized as a food item and an intensified hunt will result in a total take much greater than the number taken incidental to the bowhead hunt. A few hunters trap belugas intentionally in nets. Most, however, use rifles. Loss rates are unknown but in some areas of deep water could be high. Current subsistence use in Alaska is about 180 per year. The current proposal for Alaska management is for a waiver of 360 animals killed. Because some animals are killed and lost, only a modest increase in harvest is possible under terms of the proposed waiver.

The gray whale (classified as endangered) is occasionally taken by Alaskan natives for food. Although the meat of the gray whale is eaten, the muktuk is unacceptable as food because the skin is encrusted with barnacles and the blubber is difficult to chew. Also, the gray whale is considered to be more difficult and more dangerous to hunt than the bowhead, and tends to sink when killed.

In the absence of bowhead whaling an intensified hunt for gray whales may occur. The U.S.S.R. annually harvests an average of 160 gray whales for consumption by its aborigines. Maintenance of the gray whale population may already be threatened by harassment along its migration routes and on calving areas. Therefore the effect of an increased harvest by Alaskan Eskimos should be carefully monitored.

The shift in hunting pressure is also likely to extend to ice seals although physical inaccessibility of seals tends to limit take. The following species of ice seals (with estimated abundance) are found in the Bering Sea-Chukchi Sea area at least seasonally: largha seal (200,000-250 000), ringed seal (1-1.5 million), ribbon seal (90,000-100,000), and bearded seal (300,000). Each of these species will probably be exploited to a greater degree than at present if the bowhead whale is excluded from exploitation. The maximum take of each species will be limited under terms of the current proposal for Alaska to assume management responsibility for most marine mammals.

It is unlikely that a shift in subsistence usage would equal the present bowhead take on a biomass basis.

Other wildlife resources potentially available to subsistence hunters are listed below. This is based primarily on information provided by Mr. Robert A. Rausch, Alaska Department of Fish and Game.

Waterfowl - In spite of treaty limitations, coastal residents have taken waterfowl during the short summer and fall. While waterfowl are sufficiently abundant, in most instances, to withstand additional use it is doubtful that they will provide a viable alternative to whale meat because of individual preferences.

Bear, Polar - The annual harvest is determined to a considerable extent by the pack ice distribution and polar bears must be considered a minor element in the diet of the residents in northwestern and northern Alaska. Skins are potentially very valuable and will be eligible for sale should the state regain management authority. Approximately 100 to 200 bears are harvested annually by residents of the area under discussion.

Bears, Brown/Grizzly - These creatures are an insignificant factor in the diet of humans and could not withstand much additional pressure. They are taken as opportunity arises by residents of the area.

Small game - Hares, Ptarmigan, Grouse, Ground Squirrels, and Marmots - these creatures are used extensively where available but the supply is variable and cyclic. Generally, the populations can withstand additional pressure but again it is doubtful that they will make up for the lost whale protein.

Vegetation and Fruit - The people of the region make extensive use of the local greens (green plants) and fruit such as cranberries, blueberries, and moss berries. No doubt some increased use could be directed to these resources without harm but again they will not offset the protein loss associated with the cessation of whaling.

Dall Sheep - Only the people of Kaktovik and to a lesser extent a few of the villages along the Kobuk and the Noatak take advantage of sheep populations which are some distance from the inhabited areas and it is doubtful that they could withstand significant additional use.

Moose - Moose are important locally, particularly on the Seward Peninsula, Noatak, Kobuk, and the Colville Rivers. Some moose populations on the Seward Peninsula and Kobuk River could withstand additional hunting pressure. They are a potential alternative but an expensive one as it would require a long boat or

plane trip to get to them. They are a desired food animal over much of the Arctic where they are present.

Caribou - The Northwest Arctic Herd formerly in excess of a quarter of a million has decreased over the past five years to approximately 60,000 to 75,000 animals and it has been necessary to limit the annual harvest to 3,000 males. The bag limit is one per person.

Caribou are of importance to almost all coastal residents and potentially are an alternative to the use of whales but at this time their numbers have been reduced and human use must be restricted until they have recovered.

Furbearers - Prices for fur, particularly long haired fur such as fox, have been excellent for the past four or five years. Historically, fur prices fluctuate dramatically and they are not a stable core upon which to rest an economy. Nevertheless, a number of the areas could withstand additional trapping pressure and provide a cash alternative.

Sea Birds and Eggs - Seasonally there are large numbers of sea birds and eggs available to some of the communities that would be affected. They are used at the present time. They are not a major component of the diet although they form an important supplement and

could withstand additional pressure.

3. Impact on Eskimos

The abruptness of an immediate removal of bowhead from available hunting resources in 1978 will have an adverse impact on the Eskimo whaling communities. If the bowheads remain unavailable to Eskimos in future years, the action will have a deleterious impact on the culture, economy, and perhaps the health of the Eskimo. On the other hand, excessive harvest may lead to the eventual extinction of the bowhead so some opinion exists that deletion of the exemption in 1978 may be necessary to protect the species and will be to the benefit of the Eskimos in the long run. The following are possible impacts resulting from an effectively enforced ban on all taking of bowhead whales by Eskimo communities in Alaska:

(a) Since the economics of these villages are currently based partially on products resulting from whaling such as baleen and bone artwork there will be a decline in the levels of self sufficiency. There will be an accompanying increased reliance on welfare programs, since the non-native variety of employment opportunities do not exist in the proximity of most whaling villages. There may

also be some increase in emigration to seek employment in the urban centers, though it is not known what effect this will have on the village economy.

(b) Prohibition of bowhead whaling will produce increased pressure on other animal populations as the native subsistence-gathering systems attempt to find substitutes for the bowhead. The bowhead whale serves as a primary food source during the seasons it is hunted, in this case, spring and early summer. Bowhead whale remains an important diet item during other parts of the year, and its greatest impact will be felt during those seasons. Since caribou hunting is currently severely restricted and the recent vast tundra fires in northwest Alaska have further reduced the effective hunting areas for the Eskimos, hunting efforts will necessarily be on other marine mammal populations.

(c) The shift from a dependence on whale products to the cash economy food stuffs which are available to the villages may lower the nutritional value of the total food consumed. If a diet is provided that is not nutritionally adequate or acceptable, this will aggravate the health problems of the Eskimo population.

(d) Relationships between the native communities and non-native populations, including government agencies at various levels, will be damaged.

(e) A one-season prohibition of whaling will preclude the customary patterns of distribution and sharing which provide the symbol and basis of family and inter-village relationships. It will also preclude the occurrence of annual spring feasts and festivals centered around the whaling activity. Both of these activities are critical to the social structure and cultural identity of these villages. A one-season ban is not expected to disrupt villages political structures, although it may have the effect of making the villages more politically active in their relations with other State and Federal governmental entities.

(f) The action may increase the economic and administrative burden on Federal and State welfare programs. Significant welfare benefits may have to be dispersed to make up for loss of the whales as a primary subsistence item during and following the spring season hunting prohibition, particularly in those villages farther from economic centers.

Mitigating Measures:

If the deletion of the native exemption is extended

into future years, additional measures to alleviate the impact on Eskimos may be necessary. Disruption of ancient cultural practices may result in psychological and physiological damage that could take decades to fully evaluate. Social implications such as changing behavioral patterns of individuals, families, and communities will need to be evaluated. Social service and welfare programs available to the Eskimo, such as income assistance programs, aid to dependent children, food stamps, vocational training, and economic development assistance, will need to be supplemented and reevaluated as to their effectiveness in meeting the needs of the Eskimo whaling villages.

Two social service programs are potentially capable of providing assistance during the one-season hunting prohibition, although they are not without problems. These are (1) BIA Social Services Income Assistance Programs, and (2) the Department of Agriculture Food Stamp Program. BIA Social Services currently provides income assistance based on need, oriented to the difficulties of survival during the winter months. It uses an application process which lacks precise, objective standards for determining eligibility, and these would have to be supplemented and improved to meet the requirements

of a program implemented under this alternative. However, welfare programs may reduce the initiative of the native people to be self-sufficient. The extent of assistance provided and appropriation source of funding would have to be significantly increased (BIA Report, 1977).

Ms. Rosita Worl, Social Anthropologist, speaking on behalf of the North Slope Borough contends that "Whaling cannot be replaced with a welfare system that even now does not adequately provide services to the North Slope or to the rural areas."*

Two main problems exist in providing alternative food sources to the Eskimo villages. The first difficulty is identification of an alternative food source which provides both the nutritional qualities of the bowhead whale and is hunger and taste satisfying to villagers of the whaling communities. The alternative food source must meet the practical requirement of being a food which will be eaten by those families who rely on subsistence activities for their nourishment and mitigate the physical, psychological or cultural trauma which accompanies any drastic or forced diet change.

* Wash. Testimony, p. 54.

Testimony provided by natives at the Alaskan hearings indicated that beef and other domesticated meat sources might not serve as an acceptable substitute, even if Eskimos could afford to purchase them.

A second problem entails supplying the alternative food source to the villages on a regular basis. This would not be difficult in larger villages such as Barrow, but could present difficulty with small villages which do not have routine trade and supply sources. Supply of an alternative food source on a regular basis must be assured to all villages.

Food stamps pose significant problems for use in native villages. Their non-cash form contributed to their becoming chosen as the means to supplement native Alaskan incomes in the face of the severe caribou shortage. The program is designed to assist U.S. citizens to obtain a nutritious diet, however a price differential of only 36 percent over allotment levels in the lower 48 states was recognized in Alaska. Food prices in whaling villages are extremely high compared with prices in the lower 48. The cost of food in rural Alaska is 195 percent of Seattle prices. Prices in Barrow and other whaling villages are higher still, making it impossible for present food stamp allotments to

provide a nutritionally and taste adequate alternative to the bowhead whale as a food source.

Mr. Ray Butler, Acting Commissioner of the Bureau of Indian Affairs stated at the public hearings: "The Bureau of Indian Affairs has been unable to identify substitutes for the social and cultural roles of the bowhead. We have also yet to identify a feasible plan for supplementing the Eskimo diet."*

It is possible that meat could be provided to Eskimo villages taking whales by the Federal government operating or chartering vessels to harvest gray whales. Eskimos could be used as crew members of catcher vessels, but the cultural aspects of whaling would not be satisfied by this alternative. Eskimos do not consider the muktuk from gray whales to be an acceptable food. Furthermore, a substantial harvest of gray whales is already being made by USSR whale catcher boats for native subsistence, and there is no certainty that gray whales could be sustained under an increased harvest.

It is also possible that northern fur seal meat

* Washington Hearings, p. 132,

could be provided from the annual harvest of about 30,000 3-6 year old bachelor male seals on the Pribilof Islands. Presently most of the seal carcasses are utilized by grinding and freezing to be shipped to the lower 48 for ranch mink food. However, it is unknown to what extent the North Pacific fur seal would serve as an acceptable alternative food source. Problems such as handling, preparing, packaging, and shipping would require considerable work to overcome.

It is possible that some of the economic and cultural impacts could be mitigated by research project on the bowhead whale, involving Eskimos of the whaling villages and extending further biological training opportunities to village members. Such research should also include an effort to improve the hunting technology to make it possible to reduce the struck and loss ratio. A limited number of whales might be available to the Eskimo villages in connection with essential research which requires harvesting some bowhead whales.

4. Impact on Future Research

A total ban on bowhead whaling may produce a severance of native cooperation and communication

related to government research on the bowhead whale. The best method so far developed for obtaining quantitative data on bowhead whale abundance is by counting whales from the ice edge as they pass in open water leads. This method requires the cooperation of Eskimos to give advice on ice safety.

The only significant source of bowhead specimens used for age and reproductive studies will terminate with the cessation of native whaling. Since strandings resulting from normal mortality are rare, little biological data may be obtained from this source. Future NMFS tagging and censusing projects, will endeavor to utilize Eskimo expertise in sighting whales, handling skin boats, and identifying sites for safe operations. These activities will require cooperation of Eskimos. An expanded bowhead whale research program proposed by the Marine Mammal Commission is included in Appendix H.

B. If the United States Does Object:

1. Impact on the Bowhead Whale

The assurance of the bowhead population recovery, if recovery from an endangered status is still possible, will be reduced commensurate with the degree of control which can be effected by regulations under the MMPA of 1972, or in accordance with any amendments to the IWC schedule. As pointed out elsewhere, it is not likely that the population can increase at the present harvest level.

2. Impact on Other Species

Any shift, if a shift occurs at all, of native subsistence hunting pressures to other species will be minimized.

3. Impact on the Eskimo

An objection to the IWC action deleting the exemption for native subsistence hunting of bowhead whales from the schedule will have no short-term adverse effect on Eskimo diet, subsistence economy, or culture. There would be long-term adverse effects if the objection to the IWC action resulted in reduction in the present abundance of bowheads.

However, it is expected that an objection would be accompanied by Federal regulation of the bowhead hunt, and that such regulation would reduce the take of bowheads by the Eskimo villages. Such a reduction should not have as serious an effect on the Eskimo villages as would occur if the U.S. did not object. Also, it is likely that substantial native involvement and assistance in bowhead research efforts could be obtained if the U.S. objects to the IWC action. This would provide additional security to the future of Eskimo bowhead hunting by providing better data and information, and improved hunting technology, enabling the Eskimo and the Federal Government to regulate the optimum harvest levels for bowhead stocks considering the culture and subsistence needs of the whaling village.

4. Impact on the International Whaling Commission (IWC) and the U.S. Position

If the U.S. were to file an objection

to the IWC recommendation, the following could be the effects:

(a) It could affect U.S. efforts to improve whale conservation. Past U.S. actions might be seen as cynical and politically motivated. The U.S. has favored a moratorium and has voted for quota reductions which have had an adverse economic and political effect on other nations.

Decisions supported by the United States over the past several years have resulted in major reductions (60 percent) in the total IWC whale quotas and have caused socio-economic impacts in other countries, particularly Japan. Japanese representatives have argued that the importance of whaling and whale meat to culture, diet, and employment in Japan should be considered when recommending quotas.

(b) Objections by the Soviet Union and Japan and possibly other nations might be filed. An objection by the United States would lessen the reliance of the IWC on the recommendations of its

Scientific Committee. The United States has consistently urged the acceptance of IWC Scientific Committee findings, and to object to the first scientific recommendation that adversely affects the United States could lead to objections from other countries. If other nations object to IWC quotas, it is difficult to estimate how high they might decide to set the quotas among themselves. Objections could be placed regardless of U.S. action on the bowhead issue. Catch limits to which these nations might object are as follows:

		1977/78	<u>1976/77 Quota</u>
		<u>IWC Recommendation</u>	
North Pacific	Bryde's	524	1000
	Sperm		
	Male	0	4320
	Female	763	2880
Southern Pacific	Sei	771	1863
	Minke	5690	8900
	Bryde's	0	0
	Sperm		
	Male	4538	3894
	Female	1370	897

The U.S. holds the threat of an embargo of fishery products under the Pelly Amendment to the Fishermens Protection Act. Economic sanction by unilateral U.S. action appears to have contributed to dissuading member nations from objecting to IWC quotas.

(c) Objections by the United States, Soviet Union, Japan and possible others could lead to a disintegration of the present International Whaling Commission's program, and thus prevent the effective management of the world whale stocks.

(d) Efforts to bring all whaling nations into the IWC could be set back. Several nations have whaling operations which take whales in excess of present IWC established quotas.

(e) Filing an objection would contradict President Carter's public statements and actions of the last four months. IWC actions are consistent with his position of the year and also with past U.S. policies on marine mammal protection. However, the point was raised at the public hearings that President Carter's

stance on the issue of human rights also applies to this decision. The Inupiat people emphasize that their cultural ties with the bowhead whale must be maintained. Aside from the international effects on the IWC and the U.S. position favoring strong whale conservation, an objection by the U.S. could also have other effects.

(f) Filing an objection could adversely affect the chances of obtaining a world-wide international convention for the protection of marine mammals sought by the President in his Environmental Message and the United States for the past four years through the IWC.

(g) Because of the symbolic nature of whale conservation, there is an opinion that a U.S. objection and failure of IWC conservation efforts could have severe repercussions on other international conservation interests such as recent Inter-American Tropical Tuna Commission, tuna/porpoise agreements, the Endangered Species Convention, U.S. Bilateral Environmental Agreements with the Soviet

C. Other Considerations

Irrespective of which action is taken by the U.S., the problem of enforcement and what management actions can be taken to reduce expansion of the fishery and reduce the struck and lost ratio should be addressed.

If the U.S. does not object to the IWC action, it must enforce a total ban on the take of bowhead whales; if the U.S. does object to the IWC action, it must enforce a quota on the take of bowhead whales.

1. Enforcement

Enforcement of wildlife regulations in arctic areas of Alaska is difficult. There will be problems associated with enforcing a total ban, and these are set forth below. Problems may be somewhat ameliorated if the Eskimo communities are made aware that the harvest ban is not necessarily permanent and that reasonable cooperation with enforcement efforts, and support of scientific research activities, could result in action by the IWC

to allow some harvest in future years.

Most Eskimos will be opposed to a complete harvest ban because of the dependence on bowheads for food, and because of the significance of the whales to their culture.

Mayor Hobson of the North Slope Borough, speaking on behalf of the Inupiat people stated at the public hearings in Washington: "Lastly, I just want you to know that enforcement of a moratorium will not be possible. Regardless of your evaluation of the environmental impact in this case, we Inupiat will always hunt the bowhead, just as we have always hunted ducks and geese and just as we continue to hunt the caribou....Come what may, our people will be on the ice leads next spring, poised in our eternal hunt of the bowhead whale.'''*

*Public Hearing record, Washington, D.C., Sept. 8, 1977, page 28-29, Ms. Pamela Rich said on Behalf of Friends of the Earth: "We think that enforceability must be very seriously considered, because conflicts will only frustrate attempts at necessary cooperation in the future and

may also result, at least in the short-term in an even higher kill."

(P. 84 Wash.)

Bowheads are hunted from field camps at the edge of the fast ice, often many miles from shore. Beluga hunting is carried out from the same camps and will continue to be legal. Because of the harsh climate and dangerous ice, and the fact that beluga and seal hunting will be occurring, policing of camps will be difficult.

Whaling villages are located in an area which extends over 600 miles. No roads exist between the villages. Whaling camps from one village may be distributed over a distance of 20 miles or more and access is only by snowmobile, or helicopter.

If a bowhead whale is taken the problem of possession will arise, which could involve most people in an Eskimo village.

Enforcement activities, such as aerial surveillance of open water or snow machine

travel among all hunting camps, will disrupt village routines, hunting for beluga, seal, walrus, and birds, and bow-head whales if the latter is allowed. This could have a significant impact on normal, and essential, levels of village subsistence activities.

2. Elements of a Management Regime

A management regime that allows for a degree of self-regulation has a greater chance for success than one that simply unilaterally imposes regulations. There are numerous opportunities for flexible Eskimo self-regulation of the bowhead harvest within the following management categories:

1. Establishment of a native group to cooperate with a Federal regulatory agency in applying regulations on native whaling and with Government scientists conducting research on the bowhead population. A group composed of representatives from village councils and whaling captains could assist in selecting and establishing rules of the subsistence hunt, such as the following:

- a. Prevent further expansion of the harvest by limiting the number of crews, preferably to those of more experienced captains.
 - b. Employ techniques designed to reduce the struck/lost ratio: such as use of the darting gun and harpoon prior to use of the shoulder gun.
 - c. Require crews that have taken a whale to stop whaling for that season.
2. Establish a quota on number of whales that may be taken. An Eskimo regulating group could determine numbers of whales for each village within the quota.
 3. Establish a limited fall whaling season. If Pt. Barrow whalers do not fill their quota during the spring hunt, permit fall hunting until the quota is reached; otherwise prohibit fall hunting at Pt. Barrow. Two villages (Nuiqsut and Kaktovik) do not have spring whaling, so fall hunting should be permitted for these two villages until their quota is taken.
 4. Establish selective hunting by such measures as prohibiting the killing of

either member of cow/calf pairs.

5. Establish regulations for weapons and equipment used for the pursuit and killing of whales, and investigate improved weaponry to help reduce mechanical failure.

IV. ALTERNATIVE ACTIONS

The proposed action under consideration is whether or not the United States should accept the International Whaling Commission action to delete the native exemption for the killing of bowhead whales.

V. UNAVOIDABLE ADVERSE ENVIRONMENTAL EFFECTS

A. If the U.S. Does Object

U.S. efforts in world whale conservation may be adversely affected. The United States could lose credibility as a conservation force and its efforts in other international conservation forums may be impaired.

B. If the U.S. Does Not Object

The Eskimo argues very strongly that the bowhead hunt is essential, both for subsistence and culture. While it may be possible to provide alternatives to subsistence, the cultural impact, especially if the harvest ban is continued for more than one year, will be severe.

The only source of earned income for many older Eskimos is from the sale of baleen plates and arts and crafts objects created with baleen. Loss of this valuable commodity will create hardship for many natives.

VI. THE RELATIONSHIP BETWEEN LOCAL AND SHORT TERM USES OF MAN'S ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY.

From a biological standpoint, acceptance of the IWC resolution would allow for the greatest certainty of recovery of an endangered species, if recovery is still possible. However, the magnitude of this increase in rate of recovery is unknown because of the paucity of biological data on the bowhead whale population size and the undetermined impact of current and historic take on the population.

Elimination of the bowhead whale from the subsistence hunt will force Eskimos to intensify their hunting for other species normally taken for food such as beluga, seals, caribou, walrus, and waterfowl.

VII. ANY IRREVERSIBLE OR IRRETRIEVABLE COMMITMENTS OF RESOURCES IN THE PROPOSED ACTION SHOULD IT BE IMPLEMENTED.

There are no irreversible or irretrievable commitments. The action under consideration is whether or not the United States should object to the IWC deletion of native exemption during 1978 for the take of bowhead whales. Depending on the action taken, either a native culture or U.S. conservation efforts may be adversely affected. The IWC may reconsider the issue at its next regular meeting in June 1978 or in December 1977 as discussed previously. As pointed out elsewhere a management program will be implemented to control the harvest regardless of whether the U.S. objects.

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IX. PUBLIC HEARINGS

Public Hearings were conducted on the draft statement in Kotzebue and Barrow, Alaska and Washington, D.C. Written comments have been received and are printed herein.

In all cases a careful evaluation of the comments has been made and the text has been revised to respond to important specific suggestions or comments.

Because the issues raised in the environmental assessment of the proposed actions involve cultural, legal and international ramifications, the public hearing testimony and written comments of those with expertise, have been used extensively in these matters for clarification.

Public Hearings

The public hearing record has been deposited in Juneau, Fairbanks, Kotzebue and Barrow, Alaska, and in Washington, D.C. and is available for public review.

Witnesses representing the Inupiat people testified to the severe adverse cultural impact of the IWC decision to remove the native exemption for the harvest of bowhead whales. They do not believe that the bowhead population is in danger of extinction and request that all regulatory efforts be determined and enforced by the Alaskan Eskimo Whaling Commission, a newly formed organization whose primary purpose is to protect and enhance the traditional and subsistence harvest of the bowhead whale by the Eskimo.

Representatives of the conservation organizations testified to the impact on world conservation negotiations, should the U.S. file an objection to the IWC decision. With the exception of Fairbanks Environmental Center, they recommended that the United States not file an objection. The adverse impact on the bowhead population and on international conservation efforts in general, were thought to outweigh the adverse cultural impact of a one year ban on the native subsistence harvest.

Several major points and issues were raised in public testimony which are addressed on the following seven pages. Several witnesses testifying on behalf of the Inupiat people, discussed changes from early drafts of the Impact Statement which they believe reflect bias. The FEIS attempts to present an impartial review of all impacts of the proposed actions. Deletions were made where the subjects were not deemed directly pertinent to the decision to be made. New specific information from reviewers, which bears on the decision process, has been included.

The legal question of the validity of IWC jurisdiction over subsistence hunting is addressed at length in the response to Mr. Sutcliff's written comments in the following section. It should be pointed out that other reviewers have argued that the current Alaskan bowhead harvest is no longer traditional in nature and that it is no longer a subsistence harvest. Ms. Christine Stevens speaking on behalf of the

Society for Animal Protection Legislation, stated: "Had this whaling remained traditional, it would not have reached the present level of destructiveness to the whales. Reading through the whole DEIS, it is clearly apparent that it is the nontraditional, noncultural and economic influences that have led to a dangerously mechanized and wasteful hunt."

Representatives of Friends of the Earth claim that no real effort was made to ensure Inupiat involvement in the IWC meeting. On the contrary, attempts were made to include Eskimo representatives both at preliminary U.S. sessions and at the IWC Convention in June. In May, the NMFS funded the transportation of Mr. Dale Stotts to Washington, D.C., for a meeting of the U.S. Delegation to the IWC. Mr. Stotts missed the meeting due to illness, but did meet with the U.S. Commissioner for several hours, and was informed of the deep concern over recent reports of the expansion of whaling and an increase in the 1977 struck and lost whales. Mr. Arnold Brower and Mr. Stotts also came to Washington, for a public meeting on the bowhead problem on June 8, 1977. Requests were made for a commitment to self-regulation and that a representative be chosen for the U.S. Delegation. The Eskimos chose not to include a representative in the U.S. Delegation. At that time it was not known that the Scientific Committee might vote to delete the native exemption, and the Committee's

possible findings were learned of only the day before the U.S. Delegation to the Commission left for the Australia meeting. Partial documentation of the preceding efforts is supplied by trip reports from NMFS Alaskan personnel which are appended to this document.

Additional points raised during the public hearings and a further clarification of comments made on certain scientific matters are provided below.

Sociological

None of the Federal Agencies, have been able to identify or recommend mitigating measures, such as alternative food sources which satisfy the nutritional requirements and dietary patterns of the Eskimos. Nor have they identified welfare measures in addition to existing sources which are minimally disruptive of Eskimo culture and motivation, which would be necessary to mitigate the loss of the nutritional and cultural contributions of whale meat and blubber, should the United States decide to accept the IWC decision.

Witnesses representing the Inupiat people testified extensively regarding the loss of subsistence for food. Also, one of the most important adverse impacts to the Eskimo should whaling end, was thought to be the deterioration of mental health. A variety of causal factors were mentioned. Some of these are the loss of: potential leadership developed through role modeling; self-image and self-esteem; a non-profit industry which is self-sustaining; social status

in the community; arts and crafts as a cottage industry; rituals important to the Eskimo culture.

Some of those that testified that an increase in unemployment, alcoholism and suicides would result without a whale harvest. It was stated that the suicide rate of the Native Alaskans is approaching 3,000 percent above the national average (Kotzebue hearing testimony, page 10); unemployment figures range from 22.7 percent (1972) to 37.7 percent (1966); the unemployment rate for those 16-20 years of age is about 90 percent; some 30 percent of the Eskimos list welfare as their entire income; and little full-time and seasonal employment is available in most coastal villages. Replacement of subsistence food items, such as, gray whales and belugas, was stated not to be adequate because gray whale muktuk is not acceptable.

Cultural-Spiritual

Eskimos repeatedly stated that they should be allowed to control their own destiny with regard to bowhead whales as they have for thousands of years. However, a Eskimo spokesman stated that if it can be shown that the bowhead whale was in danger of extinction, then the Eskimo will be the first to control their own activities.

Witnesses pointed out that sharing of the whale, and all subsistence food, is the Eskimo way of life. The bowhead hunt; and associated activities, is their heritage. Although the whaling season is not long, a great deal of time is reportedly spent concerning themselves with whaling activities, such as in the preparation for festivals and feasts. These and similar activities are considered the mainstay and unity of their culture. Today, some whale meat is reportedly flown out of the villages to relatives who have moved to such places as Nome, Fairbanks, Anchorage, and Seattle. Trading with inland relatives for necessary subsistence items (e.g., fish, skins, etc.) is also considered traditional.

Eskimo witnesses related a spiritual bond with the whale. They testified that the bowhead is their whale - only God can take it away. The Eskimos feel He has put it there for their use and benefit, and the whale is part of their understanding of themselves and their Creator.

Fewer subsistence items are being used today from the whale than in earlier times other than for food and during traditional events. Baleen is mainly used now in arts and crafts, although formerly toboggans and yo-yo handles were made from baleen. Ribs are sometimes still used for fish net sinkers as they were in earlier times, and whale bone is made into ceremonial masks.

Scientific

The Eskimos repeated several times that the IWC had no jurisdiction over Eskimo whaling; that no valid scientific evidence existed for such a decision (to ban whaling); that Eskimos will not abide by a moratorium; that it would be impossible to enforce a moratorium; and that Eskimos were committed to a 5-year research program.

There was a contention on the part of several individuals testifying that William M. Marquette's report, "The 1976 catch of bowhead whales (Balaena mysticetus). . ." stated that the bowhead whale population was increasing. Marquette (1977, Appendix E) quoted the opinion of several scientists that bowhead whales have increased in abundance since commercial whaling closed and concluded that these opinions "apparently indicate that the bowhead population has been slowly increasing through the years" (p.61). Although some feel that the population may have been slowly increasing in numbers, NMFS has no quantitative data to support a conclusion that an increase has occurred. One Eskimo stated that a harvest of young whales indicates that the population is increasing. The IWC Scientific Committee believed that it is extremely unlikely that the stock would be capable of increasing given the estimated 6.7% removal rate in 1977. Younger whales occur more frequently during the time of the harvest while larger whales occur later in the season, often after the time when it is safe to stay on the ice.

Other comments suggested that no studies have been done on bowheads and that the information gathered was done by "high-school students" and other "over-nighters" using "conjecture" rather than facts, especially with regards to struck and lost data (Barrow hearing page 28). Data on bowhead whales harvested in the past have been collected by Mr. Donald Foote (1960-1962), Dr. Floyd Durham (1962-1973), Mr. Dale Rice (1961-1962), and by Mr. William Marquette (1974-1977). Each of these scientists interacted closely with Eskimos on the ice at Barrow and/or Pt. Hope. Struck and lost data reported in Marquette's paper were obtained from Eskimos during the harvest period, except where a whale was seen by a scientist to have been struck and lost. The number killed and recovered each season are based upon actual counts. However, the numbers killed but lost and struck, but lost are based upon interviews with Eskimo hunters when they return to ice c'amps. Consequently, NMFS believes that these data are underreported and that the numbers presented to IWC were minimums; i.e., even more animals were killed but lost or struck but lost than were reported.

Counting studies conducted by NMFS biologists began in the spring of 1976. The objective was to determine how many whales migrate past Barrow in the near shore lead during the period of time when it is safe to remain on shore fast ice. A similar counting study was initiated in the spring of 1977 at Point Hope. During the spring season of 1976 and 1977, at

least four biologists lived on the ice near the Eskimo whalers, and during both years one or more Eskimos remained with the biologists. Some of the counting procedures were provided in the hearings (Barrow hearing). All the scientists who have participated in the bowhead counting study are college trained and have had experience at living on the ice. As pointed out in the hearings, 24-hours watches were attempted (Barrow hearing record, p.35). During 1976, an average of 15 hours per day was spent observing whales at the lead, during the 28 days the National Marine Fisheries Service scientists were at Barrow. Slightly more than 12 hours per day was spent observing from the ice of 20 of the 28 calendar days. The records on time spent on the ice counting whales in 1977 at Barrow is essentially the same as in 1976. It was only during unsafe ice conditions or heavy fog that the scientists abandoned their observation post.

Statements were made that the number of bowhead whales were increasing ". . .on this side of Herschel Island" (Barrow Inupiat hearing p.3). Recent findings by Canadian scientists (M. Fraker, Slaney & Co., Vancouver) indicate a greater frequency of sightings of bowhead whales in the western Canadian Arctic, but that these sightings may be attributed to an increase in survey effort rather than an actual increase in the population.

Witnesses Offering Testimony at the Informal Hearings

Washington, D.C., September 8, 1977

1. Rod Moore, on Behalf of The Honorable Don Young, M.C.
2. Scott McVay, on Behalf of Environmental Defense Fund
3. Mayor Eben Hopson, North Slope Borough, Alaska
4. Nelson Green, Committee for Original People's Entitlement, Unuiik, Northwest Territory
5. Rosita Worl, on Behalf of North Slope Borough
6. Moses Olsen, Siumut Party, Greenland
7. Christine Stevens, on Behalf of the Society for Animal Protective Legislation
8. Dr. Robbins Barstow, on Behalf of the Connecticut Cetacean Society
9. Pamela Rich, on Behalf of Friends of the Earth
10. John Bockstoce, New Bedford Whaling Museum
11. Margaurete Smith, on Behalf of the Indian Health Service
12. Bernard Fensterwald, on Behalf of Friends of Animals and the Committee for Humane Legislation
13. Craig Van Note, on Behalf of the Fund for Animals, International Fund for Animal Welfare, Let Live, and Rare Animal Relief Effort
14. Ray Butler, on Behalf of Bureau of Indian Affairs
15. Stephen Young, on Behalf of the National Audubon Society
16. Kenneth Hampton and Claudia Kendrew, on Behalf of the National Wildlife Federation
17. Marion Edey, on Behalf of the Council of Environmental Quality
18. Tom Garrett, Deputy U.S. Commissioner IWC

1. Mr. Hammond, Governor of Alaska
2. Horace Ahsogeak, Alaska Eskimo Whaling Community
3. Jake Adams, Whaling Community of Barrow, Alaska
4. Arnold Brower, Sr., Barrow Whaling Association
5. John Oktollik, Point Hope Whalers and Mayor of the City of Point Hope
6. Eben Hopson, North Slope Burrough, Alaska
7. Rosabelle Rexford, No affiliation given
8. Geof Carroll, No affiliation given, resides in Fairbanks
9. Thomas F. Albert, D.V.M. University of Maryland and NARL
10. Alfred Hopson, Sr., Resident of Barrow
11. Robert Aiken, No affiliation given (a whaling captain)
12. Eugene Brower, No affiliation given (a whaling captain)
13. Arnold Brower, Jr., No affiliation given (a whaling captain)
14. Herman Aishanna, Resident of Kaktovik (a whaling captain)
15. George Matz, Executive Director for the Fairbanks Environmental Center
16. Zin Kittridge, Speaking on behalf of Jim Kowalski for Friends of the Earth
17. Tom Opie, Resident of Barrow
18. Michael Jeffrey, Attorney for Alaska Legal Services
19. Stephen Perles, Staff Attorney for U.S. Senator Ted Stevens; on behalf of himself and Senator Stevens
20. Sam Utuk Agiak, Resident of Barter Island, Kaktovik
21. Charlotte Brower, Magistrate for Barrow, Alaska
22. Bryan MacLean, Teacher

Inupiat Whaling Hearings

September 12, 1977

- | | | | | | |
|-----|--|---|---|---|---|
| 1. | Charles Edwardsen, Jr., Alaska Eskimo Whaling Commission | | | | |
| 2. | Vincent Negeak, Sr., | " | " | " | " |
| 3. | Elijah Kakinya, | " | " | " | " |
| 4. | Otis Akivagk, | " | " | " | " |
| 5. | Wesley Aiken, | " | " | " | " |
| 6. | Thomas Brower, Sr., | " | " | " | " |
| 7. | Daniel Leavitt, | " | " | " | " |
| 8. | Bert Okakok, | " | " | " | " |
| 9. | Arnold Brower, Sr., | " | " | " | " |
| 10. | Rosabelle Resford, | " | " | " | " |
| 11. | Nathaniel Napageak, | " | " | " | " |
| 12. | Raymond Neakov, | " | " | " | " |
| 13. | Eugene Brower, | " | " | " | " |
| 14. | Ralph Ahkivqak, | " | " | " | " |
| 15. | Jacob Adams, | " | " | " | " |
| 16. | Arnold Brower, Jr., | " | " | " | " |
| 17. | ?rnest ?rankson, | " | " | " | " |
| 18. | Alfred Hopson, Sr., | " | " | " | " |

1. Dennis Tiepleman, No affiliation given
2. Jeff Smith, No affiliation given, resident of Kotzebue
3. J. Keith Lawton, Episcopal representative, Diocese of Alaska
4. Clinton Swan, Resident of Kivalina, Alaska
5. Lena Sours, Kotzebue, Alaska
6. Tom McKenna, Mauneluk Association
7. Samuel P. Barr, Kivalina, Alaska
8. Chester Seveck, No affiliation given
9. Morris Oviok, Point Hope, Alaska
10. Duane Ozeva, Represents whalers of Gambell, Alaska
11. Franklin Kaningok, Gambell, Alaska
12. Conrad Oozeva, Gambell, Alaska
13. Roger Silook, Gambell, Alaska
14. John Apangalook, Gambell, Alaska
15. Clarence Waghiyi, Savoonga, Alaska
16. Stephen Levine, District Attorney, Alaska Legal Services, Nome
17. Calep Pungowiyi, Representing Bering Straits Region through Kawerak, Incorporated
18. Marilee Russell, Mauneluk Association, Kotzebue
19. Marty Strauss, Mauneluk Association, Kotzebue
20. Stephen Perles, On behalf of Senator Stevens
21. Maynard Eaken, Mauneluk Association, Kotzebue
22. Robert Mackey, Mauneluk Association, Kotzebue
23. Billy Weber, Point Hope, Alaska
24. Luke Koonook, Point Hope, Alaska
25. Daniel Stalker, No affiliation given
26. Willie Hensley, President, NANA Development Corporation
27. Annie Kennothy, Kotzebue, Alaska
28. Beatrice Vincent, Point Hope, Alaska
29. Dr. John Burns, On behalf of Governor Hammond
30. Dr. John Burns, On his own behalf, resident of Fairbanks
31. IDA Koonick, Point Hope, Alaska
32. Fletcher Gregg, Sr., Kotzebue, Alaska
33. Alec Frankson, Point Hope, Alaska
34. Robert Newlin, Chairman of the Board, NANA Regional Corporation
35. Susie Ticket, Kotzebue, Alaska
36. Dr. Jeremiah Farrell, Kotzebue, Alaska
37. Pamela Herman, Caribou News
38. Kitty Kinneveak, Kotzebue, Alaska
39. Patrick Attungana, No affiliation given
40. Rachel Craig, No affiliation given
41. Dale Brower Stotts, North Slope Borough
42. Arnold Brower, Sr., Whaling Association of Barrow
43. Charles Edwardson, Jr., Alaska Eskimo Whaling Commission
44. Raymond Gabriel, Kivaling, Alaska
45. Flora Malloy, Rural Alaska Community Action Program

46. Issac Kayutak, No affiliation given
47. Tony Peters, Mauneluk Corporation
48. Bessie Kowunna, Kotzebue, Alaska
49. Lilly Oktallik, Point Hope, Alaska
50. Paul Green, Ketzebue, Alaska
51. Eva Attunganna, Point Hope, Alaska
52. Hubert Koonuk, Point Hope, Alaska
53. Reverend Herbert Kinneyeak, Point Hope, Alaska
54. Laurie Kingik, No affiliation given
55. Reverend Donald Oktollik, Point Hope, Alaska
56. Lucy Jensen, Kotzebue, Alaska
57. Charles Jensen, Kivalina, Alaska
58. Charlie Sheldon, Shungnak, Alaska

Written comments on the Draft Statement

The FEIS attempts to respond to specific comments directly relating to information contained in the Draft Statement. Comments on whether there has been overemphasis or underemphasis on certain impacts can only be addressed by repeating that the objective of the document is to present a fair and balanced review of this very controversial problem.

DON YOUNG
CONGRESSMAN FOR ALL ALASKA

COMMITTEES:
INTERIOR AND INSULAR
AFFAIRS
MERCHANT MARINE AND
FISHERIES

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August 18, 1977

Dr. Robert Schoning
Director
National Marine Fisheries Service
U.S. Department of Commerce
Washington, D.C. 20235

Dear Dr. Schoning:

I would like to take this opportunity to submit for the record my comments on the Draft Environmental Impact Statement entitled "International Whaling Commission's Deletion of Native Exemption for the Subsistence Harvest of Bowhead Whales."

On the whole, the Statement seems to be complete and fairly addresses the issue. The question, then, is which of the alternative actions should be taken: should the United States object to the I.W.C. decision, or should we let it stand? It is these alternatives that I wish to address.

As the Statement indicates, the subsistence harvest of bowhead whales has been recognized by both international and domestic law as a very special case. It is one thing to ban commercial whaling when adequate substitutes for whale products are available and when alternative jobs can be found for those employed in the whaling industry. It is quite another to suddenly halt a practice that forms the basis of an ancient culture and which supplies the major source of food for up to five thousand people.

The Schedule to the International Whaling Convention recognizes the subsistence use of bowhead whales by aboriginal natives. The Marine Mammal Protection Act and the Endangered Species Act both specifically exempt Native hunting for subsistence purposes. The meanings of these actions are clear- they were done to protect the Inuit people of Alaska and allow them to pursue their traditional lifestyle. Suddenly, however, we are faced with a complete ban on subsistence harvest and the subsequent destruction of this lifestyle. To reverse the clear intent of the law is preposterous.

DON YOUNG

CONGRESSMAN FOR ALL ALASKA

COMMITTEES:

**INTERIOR AND INSULAR
AFFAIRS**

**MERCHANT MARINE AND
FISHERIES**

Congress of the United States
House of Representatives
Washington, D.C. 20515

WASHINGTON OFFICE

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(2)

Let us look at the impacts of the two alternatives. To not object means to ban all subsistence hunting. As the Statement clearly states, the Native people of Arctic Alaska depend heavily on the bowhead as their prime source of food and as one of the cornerstones of their culture. In addition, the income gained from the sale of artifacts made from whalebone is the only money available to many of the people in the smaller villages. If hunting is banned, two important events will occur:

1. The people of Arctic Alaska will have to rely on some alternative food source. Currently, such a food source could only be other natural food that may become available, including gray and beluga whales, seals, migratory waterfowl and caribou. Each of these wild food sources is suffering its own problems with depletion. The gray whale, while increasing in stock size, is doing so only because of complete protection. An increase in gray whale harvest will only lead to future cries by preservation groups to save that whale as well. Belugas, while seeming to hold their own, are hunted by Canadian Eskimos. They are also more difficult to hunt because of their tendency to sink upon being struck. If we are worried about the "struck and lost" bowheads, what will be our concern about belugas? Waterfowl are governed by international treaties. Although specific exemptions are allowed for subsistence hunting, will these exemptions continue if the hunting levels increase? Finally, the caribou in Arctic Alaska are already at very low levels due to a number of factors. The total allowable harvest for Arctic Alaska in 1977 is three thousand caribou. There is no way that a switch can be made from bowheads to caribou without further decreasing the caribou population. This, then, leaves only commercial food sources, which are nonexistent in some areas, prohibitively expensive in all areas, and which may not provide a nutritionally adequate diet for the people. The question remains then: how are we to feed these people?

2. The second event involves the impact on Native culture. As the Statement points out, the Inuit people see whaling as the mainstay of their culture. To quote one whaling captain: "Whaling is the thing of total importance- jobs, the outside world, time and school can wait." The banning of subsistence whaling will remove this as a cultural support. At a time when our President is calling for the recognition of

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CONGRESSMAN FOR ALL ALASKA

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(3)

human rights and the formation of a National Heritage Trust, this seems like a strange action to take. A cultural breakdown such as this can only cause an increase in the social problems in Arctic Alaska. I question whether this is a preferable alternative.

It is obvious to me that the only viable alternative is to object to the I.W.C. ruling. The matter of regulations is a separate one which I will not consider in depth here. I do feel, however, that any regulations must be promulgated only after they are thoroughly discussed with the Inuit people.

One other alternative has been suggested by the National Marine Fisheries Service. Under this "game plan", the U.S. would not issue an objection and thus ban the Spring 1978 hunt. During the I.W.C. meeting in June, 1978, the U.S. delegation would ask the I.W.C. to rescind its decision on subsistence whaling if such whaling was regulated by the National Marine Fisheries Service. The theory behind such action is that the I.W.C. would be willing to reconsider its views, the Inuit people would miss only one hunt, the U.S. would not lose face, and everyone would be happy.

I would reluctantly support this alternative, but only if certain conditions are met. Firstly, we must be positive that the I.W.C. will reconsider its decision. Secondly, the regulations drawn up by the National Marine Fisheries Service must be formulated in consultation with the whaling community and must provide for a continuing adequate subsistence harvest. If these conditions are not met, I cannot support this alternative.

One further comment seems necessary at this time. The Statement lists the resolutions passed by the I.W.C. at their past meetings calling for further study on the bowhead whale by the United States. However, the National Oceanic and Atmospheric Administration has indicated that they first began working on the problem following last year's I.W.C. meeting. I fail to understand why some action was not taken before this, in consultation with the whaling community and the Alaskan Congressional delegation, so that we would not face the situation that we are facing now. Such lassitude on the part of the N.O.A.A. certainly deserves further study.

1

DON YOUNG

CONGRESSMAN FOR ALL ALASKA

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(4)

In conclusion, let me once again stress that subsistence whaling is of extreme importance to the people of Arctic Alaska. I will continue to oppose any attempt to halt such whaling.

Sincerely,



DON YOUNG
Congressman for all Alaska

Response to comments received from Congressman Don Young:

1. In 1973, through contract with the University of Southern California at Los Angeles, the National Marine Fisheries Service (NMFS), through the Marine Mammal Division of the Northwest Fisheries Center (NWFC), supported census and spring migration studies on the bowhead whale in the western Arctic. This study was conducted by Dr. Bernard C. Abbott and Dr. Floyd E. Durham.

The National Marine Fisheries Service began field studies relating to the bowhead whale harvest in Alaska in 1974 (see Northwest Fisheries Center Processed Report of January, 1975, by Fiscus and Marquette, entitled "*National Marine Fisheries Service Field Studies Relating to the Bowhead Whale Harvest in Alaska*", 1974).

During the 28th Annual Meeting of the International Whaling Commission in June 1976, the Scientific Committee strongly recommended that necessary steps be taken to limit the expansion of the bowhead fishery and to reduce the loss rate of struck whales (without increasing total take). The Committee also recommended:

- (1) a thorough examination of early whaling history including inspection of log books to provide information on past population levels;
- (2) making studies to help assess mortality rates of struck but lost whales;
- (3) assessment of current population status; and
- (4) collection and compilation of better information on sex, length, maturity, and age of captured whales.

In response to these recommendations, NMFS initiated several actions consistent with the IWC recommendations and maintained frequent contact with Alaska natives who take these whales for subsistence use. Data compilation and preparation of a status report began in late summer, along with planning for contacting the natives and for monitoring the spring hunt. On January 7, 1977, a letter was sent to 10 Alaska native organizations and/or villages in an effort to open communication on the subject of native whaling. The letter emphasized concern over rising bowhead harvest levels.

The letter was followed by staff visits to Alaskan whaling communities of Gambell, Savoonga, Kivalina, Point Hope and Barrow, and meetings with Alaska native leaders in Nome and Kotzebue, in February and March 1977. (Contacts in the

villages consisted of individual conversations, plus open meetings/discussions with whaling captains, crews and village leaders regarding the inevitability of Federal regulation unless voluntary action was taken by the natives to reduce the bowhead kill and struck/lost ratio.

Initial plans have been completed for a workshop during calendar year 1978 to begin reviewing logbooks as recommended by the IWC. During April-June 1977, an increased research staff began monitoring the spring harvest and gathering additional data requested by the IWC.

On April 29, 1977, NMFS contacted the Village of Point Hope and the North Slope Whaling Association, emphasizing invitation to send a native representative to the IWC meeting. The Whaling Association declined the invitation.

In May 1977, NMFS published the following reports on bowhead whales:

1. *"Population Biology of the Bowhead (Balaena mysticetus) and Beluga (Delphinapterus leucas) Whale in the Bering, Chukchi, and Beaufort Seas"*.
2. *"The 1976 Catch of Bowhead Whales (Balaena mysticetus) By Alaskan Eskimos, With a Review of the Fishery, 1973-1976, and a Biological Summary of the Species"*.

On May 26, 1977, representatives of NOAA and NMFS met in Washington, D.C., with Dale Stotts of the North Slope Borough to discuss increased native harvest levels, methods to limit expansion of the fishery, methods to reduce struck/lost ratio, and increasing public concern over the problem.

A public meeting was held on June 8, 1977, to discuss possible regulation of the Alaska native harvest of the bowhead whale with particular emphasis on reduction of the struck/lost ratio.

On June 10, 1977, a FEDERAL REGISTER (F.R.) notice was published proposing the bowhead whale as a depleted species under the Marine Mammal Protection Act. The public comment period on this proposed action, which is a prerequisite to regulation under the Marine Mammal Protection Act, closed July 11, 1977.

We believe that the above actions taken by NMFS were consistent with the June 1976 recommendations of the IWC, however, it is admitted that NMFS's attempts to persuade

the natives to take voluntary action to reduce the expansion of the fishery and to reduce the struck/lost ratio, were unsuccessful.

9/10/77
6351 N. Oakley Ave.,
Chicago, Ill. 60659

Mr. Robert Schoning,
Director, National Marine Fisheries Service,
Washington, D. C. 20235

Dear Mr. Schoning:

I thank you for sending me the DEIS ON BOWHEAD WHALES and I wish to comment on it and other matters pertaining to the Bowhead Whale.

It should be emphasized that the DEIS BOWHEAD WHALE REPORT ~~(DEWR)~~ does not bring out that if the eskimos are allowed to hunt the Bowhead they will eventually exterminate it, because it is already endangered and has not made a recovery where it has been protected for about 40 years -- and then what will happen to the eskimo culture that depends on the Bowhead Whale? One would think that if they are so concerned about preserving their culture that they would preserve the Bowhead by putting a moratorium on the Bowhead hunt to ensure that they would also preserve their culture that they claim the Bowhead is so much a part of. Somehow I cannot accept their philosophy that they have to hunt the diminishing Bowhead to preserve their culture.

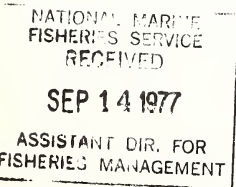
} 2

So, if we let the eskimos continue on their path of exterminating the Bowhead we will end up with the following situations:

1. No Bowheads.
2. A loss of eskimo culture as they claim it is today.
3. A loss of U.S. credibility for world wide conservation for allowing this to happen that could result in an open season on other species of marine life that are threatened whether they are protected or not.

If we exempt the eskimo from the Bowhead hunt we will:

1. Give the Bowhead a chance for a comeback.
2. Maintain our credibility for world wide conservation.
3. Help the eskimos adopt to a new lifestyle which is a better alternative for all.
4. Have the Bowhead around to study for the secrets that we will unmask to understand the creature and its habitat for our benefit. (The whales are the barometer of the oceans and they register the condition of their environment like the canary does that is used to test the atmosphere of the coal mines.)



5. Protect the ecological relationship of the whales and their habitat that we yet do not understand. (Some species of barnacle, for example, survive only because certain whales are their hosts. Without these whales these barnacles would disappear. What else would be affected in the oceans if the whales disappear--we don't know? We also don't know how detrimental their disappearance would be to our survival.)

The eskimo situation also brings out other aspects detrimental to our habitat. Part of the pressure on the Bowhead and other indigenous resources is the uncontrolled population of the eskimos in relation to the natural resources that they are already overburdening when it is coupled with the highly efficient, but plundering, westernized technology. Disasterous effects of this can be seen in other countries and in our own in certain areas. This is another culture shock that the eskimos, as we, have yet to cope with. While we are making some strides to have some responsible breeding the eskimos have yet to recognize the problem.

If we do not find a way to limit populations of the world, including aboriginal populations, we will deplete more than the Bowhead and such breeding pressures will be beyond the control of legislation and policing if it gets out of hand.

The eskimos represent more than a conflict of two cultures but are a test case of the survival of humanity that does not understand the limits of nature in both cultures. If western apologists and eskimo traditionalists are so concerned about eskimo culture then while the eskimo still hunts the Bowhead let us eliminate the weapons that are not in the eskimos culture that we gave him that extend a "macho mythology." Let's eliminate the explosive darts, the bombs, the firearms--the rifles, block and tackle, the snow mobiles and other non-eskimo technology. Until the eskimo goes back to hunting with his primitive weapons such as bone tipped harpoons we cannot take seriously his claim about disrupting a culture that isn't even there to be disrupted. Nor can we take seriously those apologists and lobbyists that represent this eskimo mythology.

Since 1931 the Bowhead has been on the protected list by the whaling nations and it has not made a come back. The stopping of killing of the Bowhead by the eskimos can give it this chance. Over 80 nations think so and so should we. An indefinite moratorium of the killing of the Bowhead by aboriginal populations should be implemented.

Respectfully yours

Tony Mallin
Tony Mallin

PROJECT SAVE OUR WHALES

2. The text of the DEIS has been amended indicating that irrespective of which action is taken, there remains uncertainty whether recovery of the bowhead whale from an endangered status is still possible. Additionally, it has been noted that long term adverse effects could result to the Eskimo, if an objection to the IWC resolution resulted in a further reduction of the species. However, page 5 of the DEIS states that if an objection were filed, "further action would include regulation of native subsistence harvest under the Marine Mammal Protection Act of 1972". Pages 61 and 65 of the DEIS also state that if an objection were filed, the Federal Government will attempt to reduce the kill through regulations and the establishment of a quota.

IES: International Ecology Society

1471 Barclay Street
Saint Paul, Minnesota 55106
USA



R.J.F. Kramer
President

Vigilance for Our World's Environment

September 12, 1977

Environmental
Preservation
Education
Humane

Mr. Robert Schoning, Director
National Marine Fisheries Service
National Oceanic and Atmospheric Administration
U.S. Department of Commerce
3300 Whitehaven Street, Northwest
Washington, D.C. 20235

Dear Mr. Schoning:

I received a copy of the Draft Environmental Impact Statement on the International Whaling Commission's Deletion of Native Exemption for the Subsistence Harvest of Bowhead Whales on August 18, 1977. I have reviewed this document with other IES representatives and find that we believe the U.S. Government should not file any objection to the IWC's order to stop the killing of Bowheads.

The Bowhead whale must be preserved to the fullest extents possible. There is no need to continue this unnecessary killing.

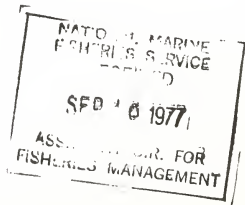
Some Eskimos claim if this killing was stopped it would destroy a part of their culture. If so we should stop killing of the Bowheads! How are they going to continue their culture if they hunt the Bowhead to extinction. } 3

Please save the Bowhead whale.

Whales always,

Mr. R.J.F. Kramer, President

RJK/slk



Response to comments received from Mr. R.J.F. Kramer,
International Ecology Society:

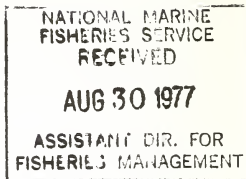
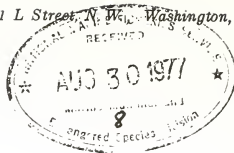
3. See response to Comment No. 2.

Regina Bauer Frankenberger
President

Alice Herrington
Executive Director

Bernard Fensterwald, Jr.
Counsel

Jowanda Shelton
Washington Director



August 22, 1977

Mr. Robert W. Schoning
United States Department of Commerce
Director, National Marine Fisheries Service
6001 Executive Boulevard
Rockville, Maryland 20852

Dear Mr. Schoning,

Friends of Animals, Inc., and the Committee for Humane Legislation, Inc., would like to submit the following comments on the Draft Environmental Impact Statement relating to the Bowhead whale.

It is difficult for us to see why such a commotion is being made over this matter. In fact, in view of the very wasteful kill/recover ratio, we cannot see why the taking of this fast-disappearing mammal was not banned long before the International Whaling Commission forced the issue. After all, section 101 (b) (3) of the Marine Mammal Protection Act states very clearly that the so-called native exemption does not apply to takings which are accomplished in a "wasteful manner."

Be that as it may, the IWC has now forced our hand, and we would seem to have absolutely no choice but to apply our moratorium to the natives as well as the nonnatives.

You have stated some of the reasons very clearly in your DEIS, especially the disastrous international consequences of protesting.

We have doubts about the seriousness with which we should take all of the talk about the "old ways." Our skepticism is not lessened by much of the factual information set forth in the DEIS. After all, how much is left of the "old ways," what with guns, bombs, and snowmobiles. For example on p. 67 it is flatly stated; "Whaling camps may be distributed over a distance of 20 miles or more and access is only by snowmobile."

Assuming arguendo the importance of the Bowhead to native subsistence and culture, a protest would seem insane from all standpoints: a large continued kill will result in extinction which will be to the disadvantage of 1) the natives, 2) mankind in general, and 3) the Bowhead....you might even call it "termination with extreme prejudice," to use a favorite expression of another government agency.

]-4

We are disturbed with the discussion at p. 68 of "self regulation." As in other fields of the law, where there is a very unpopular regulation, it is especially inappropriate to rely upon self regulation. The IWC order must be enforced by the United States Government, not by the natives or the State of Alaska.

5

Thanking you for the opportunity to comment on this subject, I remain

Most sincerely yours,



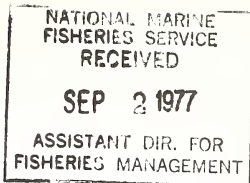
Bernard Fensterwald, Jr.
Counsel to FOA and CHL

Response to comments received from Mr. Bernard Fensterwald, Friends of Animals, Inc., and the Committee for Humane Legislation, Inc.:

4. See response to Comment No. 2.
5. Pages 61 and 65 of the DEIS state that the U.S. Federal Government will be responsible for enforcement. The discussion on page 68 encourages native management and regulatory regimes as well as cooperation in applying Federal regulations. However, it is the Federal Government which ultimately will be responsible for enforcing regulations, irrespective of which action is taken by the United States regarding the IWC action.

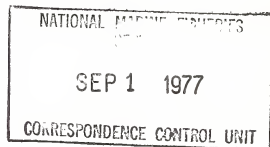
SOCIETY FOR ANIMAL PROTECTIVE LEGISLATION

P. O. Box 3719
Georgetown Station
Washington, D. C. 20007



August 31, 1977

Mr. Robert Schoning
National Marine Fisheries Service
3300 Whitehaven
Washington, D.C. 20235



Dear Mr. Schoning,

Thank you for the opportunity to comment on the Draft Environmental Impact Statement on bowhead whales.

We were pleased to note on page 11 in material quoted from the Scientific Committee of the International Whaling Commission that "one aboriginal association in Canada plans to regulate its take to one bowhead every two years." We hope similar associations in the United States will adopt an equally seriously conservative policy. Such an initiative with assistance from government agencies might well solve the entire problem.

On page 16 we note (again from the IWC Scientific Committee) that the Bering Sea stock of bowhead whales "is roughly at best only ten percent of its initial size." Yet the percentage of whales struck but lost increased to about three times the number killed and landed in the spring of 1977. Clearly, the situation is critical and changing for the worse.

Had this whaling remained traditional it would not have reached the present level of destructiveness to the whales. Reading through the whole DEIS it is clearly apparent that it is the non-traditional, non-Innuited cultural and economic influences that have led to a dangerously mechanized and wasteful hunt.

On page 27 the DEIS states "whales were traditionally taken with harpoons and lances fashioned from stone, ivory, and bone." However darting and shoulder guns were introduced by 19th century commercial whalers and "the design of these weapons and the state of technology have not changed substantially since the peak of the commercial whaling era."

On page 28 we learn "the annual Alaskan native harvest averaged an estimated 10 bowheads from 1946-1970." Surely, this number cannot be characterized as less traditional than the 190% increase shown for the 1970-1976 period. A growth industry

using an endangered species is the reverse of the traditional Inuit culture in which man and animals coexisted for thousands of years.

New Eskimo whaling crews, resulting from the increased availability of cash, are noted on page 30 and on page 34 we read, "Considerable skill and courage are required to employ the darting gun, and recent observations indicate that whales are now often struck first with bombs fired from shoulder guns." Thus injured whales swim away to suffer and often to die of these hideous bomb wounds inflicted by individuals lacking the degree of courage and skill which their forebears employed.

Another element, not mentioned in the DEIS is a reportedly heavy use of alcohol by Eskimo whalers at the present time. A recent letter from a Public Health Service worker states: "I personally sighted three bowhead whale carcasses on the beaches adjacent to Barrow, Alaska between June 25 and July 20; one was immediately in front of the PHS Hospital where I was working..."

"My work in the clinic there included history taking which often dealt with the recent whaling festival, the manner in which whales are killed, how many are brought in, etc. A few observations: 1) the number of 18 dead whales I reported earlier was the figure most frequently cited by the eskimoes themselves re the kill at this spring's run. 2) it was suggested to me by several extremely intoxicated eskimoes that in fact the kill is generally three times that which is brought in to the shore, i.e. in this case approximately 54, in that many whales are wounded or killed and then set adrift or sink (?), with no effort taken to recover them. Thus the 'stinkers' that roll on to shore in the late spring."

Changes in Eskimo life style include snowmobiles as substitutes for dog teams. Page 38 says, "Much of the blubber formerly used as dog food, is now discarded." Later in the DEIS, however, we are informed that large amounts of fat are needed for human nutrition in the Arctic (page 42). It would appear that a lower kill of whales would provide more than enough of the fats needed if the blubber were not discarded.

In 1976, there were "688 active male participants in the hunt."

The DEIS is not entirely clear on the distribution of whale meat. Page 47 mentions "occasional sale of whale meat." Elsewhere (Appendix B, page 1) it is reported that 10,000 Eskimoes eat it to some extent.

6

On page 54 a remarkable understatement appears. "It is unlikely," says the DEIS "that this endangered species would be capable of increasing its numbers under the present harvesting regime..." To date, the only species of whale known to

have increased in numbers after the type of decimation undergone by the bowhead, is the California gray whale. Even before the commercial whalers came the annual Eskimo kill was only 15 to 18(Appendix E, page 60) now that the bowhead has been reduced to only a tenth of its original population, more than one hundred whales are killed or struck and lost in a single hunt. There cannot be the slightest doubt that a continuation of the present trend will result in biological extinction of the bowhead whale.

Another statement on page 54 is at variance with comments made by Floyd Durham at an informal meeting, July 29 with the chairman and a number of members of the Fish and Wildlife Conservation and the Environment Subcommittee of the House Merchant Marine and Fisheries Committee. Mr. Durham stated that salmon was in adequate numbers to serve as an important alternative food source.

Apart from this, we believe that frozen whole beef, mutton or pork carcasses should be provided in the amounts necessary to substitute for meat and fat not available because of the zero quota on the spring hunt, and that this meat should be divided by the villages in the same way as whale meat is allocated among them.

In our view, this substitute should not be in the form of welfare(page 58) or food stamps(page 60) but rather as a special measure taken in unusual circumstances to ease the problem while a more permanent solution is being sought.

If agreement is reached that, for example, eight bowhead whales will meet the traditional hunt requirements per year in the U.S. arctic and that striking of whales will be limited to the eight, a proposal could be put forward to the International Whaling Commission meeting in June, 1978 requesting eight bowhead whales for subsistence purposes with a reasonable chance of acceptance by the seventeen member countries.

The bowhead is the most severely endangered of all the great whales that are still killed at all. There is no doubt that complete cessation of taking would be the best way of assuring survival of the species, particularly since the last seven years has been a period of excessive killing. It may be that the IWC will not agree to an annual quota of eight. In our view, however, it is a compromise worth seeking since the Eskimos involved strongly object to stopping whaling entirely. An annual take slightly lower than the average from 1946-1970, but much higher than the Canadian aboriginal organization that proposed taking one bowhead every two years, appears to be reasonable from the standpoint of the Innuits. From the standpoint of the species, we know that a take of this number did not drive it to extinction during the 24-year period in which it was maintained. This is, indeed, a rough and ready analysis, and if

more were known about the bowhead whale decisions could be greatly refined. While that knowledge is being sought, with the assistance of experienced Eskimo whalers who may be willing to transfer their expertise to learning more about the bowhead's life history, (page 62) the proposed compromise seems to be just within the realm of possibility.

We would be very reluctant to see an increase in the taking of beluga or gray whales. With the provision of whole carcasses of domestic animals as a stop gap substitute we do not believe the pressures suggested on page 55 of the DEIS need come about. Neither need there be a "deleterious impact on the culture, economy, and perhaps health of the Eskimo" (page 56).

Walrus hunting is mentioned on page 57 as being "restricted." Only if it is wasteful is it restricted under the Marine Mammal Protection Act. Native walrus taking has repeatedly been characterized as wasteful. Here is an area that can benefit by the zero bowhead quota by providing an incentive to recover the walrus meat when animals are killed.

With regard to the impact on the U.S. position in the IWC, a statement is made on page 63 that filing an objection "could undermine U.S. efforts to improve whale conservation. Past U.S. actions might be seen as cynical and politically motivated..." These statements are not only true but are greatly understated. The fact is that the whaling nations would seize upon such U.S. weakness with glee to justify their own behavior and to reverse the trend toward lowering quotas each year which the United States has been able to maintain for the past four years, greatly to the benefit of whales throughout the world. If we demonstrate weakness and unwillingness to face up to a serious threat to a desperately endangered species of whale in our own waters we will have abdicated our leadership role in the IWC, in the Endangered Species convention, and in other international wildlife forums where our determination is desperately needed at this most critical time in world history.

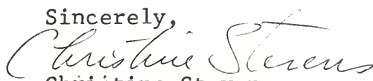
Major setbacks within the IWC that would occur if the U.S. filed an objection, are succinctly listed on page 64. We agree with them all. President Carter's personal leadership, safeguarding the environment generally and whales in particular, makes U.S. leadership as a nation in these areas doubly effective. By the same token, any weakening of the U.S. position would be a graver disaster for the future of human actions vis-a-vis the whales and other endangered species than if we had failed to climb to so conspicuous a level in the continuing struggle to protect the existing diversity of life on earth. In certain areas our country has lost the trust we formerly inspired throughout the world, but where endangered species are concerned we enjoy that trust. We must not betray it.

In conclusion, we would note approval of several practical points made in the DEIS concerning enforcement: the numbering of weapons and ammunition, the banning of shoulder guns, and the requirement that any single crew retire from the hunt after taking a whale.

Substitute materials should be made available to Eskimo artists who have been accustomed to using baleen and whale bone (page 70). Some scrimshaw artists in Massachusetts are using beef bone or specifically prepared plastic simulations. It is important to encourage continuance of traditional arts through specific provision of hard materials of appropriate consistency to Eskimo carvers. With such materials the artists can continue sale of objects for cash and may even increase their activity if they so desire.

We strongly urge that the decision be made not to file an objection with the International Whaling Commission and that thorough planning be made to develop the best cooperation with Eskimo communities that have whaled over a long period of years.

Sincerely,


Christine Stevens,
Secretary

Response to comments received from Ms. Christine Stevens,
Society for Animal Protective Legislation:

6. Additional information on the distribution of whale meat has been incorporated in the text of the final EIS in the section titled "Utilization of the Whale."

Page 47 of the DEIS mentions "occasional sale of whale meat"; testimony provided at the three hearings indicated that the whale meat is not sold, but occasionally is bartered. The text of the final EIS has been corrected to reflect this new information.

Natural Resources Defense Council, Inc.

917 15TH STREET, N.W.
WASHINGTON, D.C. 20005

202 737-5000

September 22, 1977

Western Office
664 HAMILTON AVENUE
PALO ALTO, CALIF. 94301
415 327-1080

New York Office
15 WEST 44TH STREET
NEW YORK, N.Y. 10036
212 869-0150

Mr. William Jensen
Marine Mammal Endangered Species Division
National Marine Fisheries Service
3300 Whitehaven Street, N.W.
Washington, D.C. 20235

Dear Mr. Jensen:

We wish to submit the following comments of the Natural Resources Defense Council on the Draft Environmental Impact Statement (EIS), concerning the International Whaling Commission's Deletion of Native Exemption for the Subsistence Harvest of Bowhead Whales.

While the Draft EIS appears to be complete in its review of the available data on the bowhead whale, it is clear that these data are appallingly inadequate for assessing the prospects for the species' survival or restoration. First, estimates of the Bering Sea population are based on sightings by whalers and, more recently, National Marine Fisheries Service scientists. The accuracy of these figures must be judged in light of the influence of weather conditions on sighting probabilities. Further study is necessary to establish more reliable estimates.

Second, biological data on the bowhead are extremely fragmentary and the result of deduction rather than direct observation. Age of sexual maturity, breeding period, gestation period, calving period, lactation period, and frequency of calving are not known with certainty. Behavioral data which might indicate particular vulnerability to certain weather conditions, oil pollution, or cycles in prey availability are apparently totally lacking. Present study methods, which rely almost exclusively on examination of whales taken by Eskimo for food, do not promise to supply the missing data.

Even figures of total whales killed annually are incomplete. The number of whales landed in Alaska are known, but there are only estimates of the kill by Soviet Eskimo. The exact number of whales killed but lost or struck but lost is not known; neither is the number of those struck which subsequently die. The data do indicate that the struck/lost ratio is distressingly high: approximately 50%, and increasing. It is clear that careless hunting practices have greatly increased the effective hunting pressure on the bowhead without providing any benefit to the Eskimo.

We find the Draft EIS sorely deficient in the analysis of those alternatives which it considers. First, it does not give proper recognition to the consequences of a United States objection to the ruling of the International Whaling Commission's ("IWC") Scientific Committee. Such an objection at this time would necessarily be made without substantiating scientific evidence that the bowhead whale can sustain the present hunting pressure. The United States must bear the responsibility for the lack of adequate data. The IWC first asked the U.S. to undertake a comprehensive research program in 1972. A U.S. objection under these circumstances would encourage the Soviet Union and Japan to object to IWC quotas for all whale species. The implications are staggering. Not only would this U.S. action destroy the international cooperative program to prevent the extinction of cetaceans; it would also undermine U.S. leadership of the entire conservation movement. That U.S. leadership is sufficiently important that the result could be collapse of the Inter-American Tropical Tuna Commission, Tuna/porpoise Agreements, the Convention on International Trade in Endangered Species of Fauna and Flora, and various bilateral environmental agreements. In effect, U.S. objection to the IWC ruling would undermine, if not destroy, our long-standing international conservation policy in order to prevent temporary disruption of nine Eskimo villages.

Second, the Draft EIS exaggerates the probable impact of a brief hunting moratorium on the Eskimo villages concerned. First, as is pointed out in an appendix of the document, for nearly all non-food uses whale products have been replaced by industrial goods. The fact that increasing numbers of Eskimo can purchase these products as well as expensive whaling equipment indicates a growing involvement in the money economy. This process, and its consequent social disruption, will continue whether or not a hunting moratorium is imposed. Second, all the villages have experienced hunting seasons when no whales were landed. No doubt these were periods of economic and dietary hardship. However, the economic and health consequences of a moratorium should be less than those of a hunting failure because the shortages can be anticipated and remedial measures taken by village, State, and Federal agencies. This assistance would be a burden for the agencies and would mean a loss of status for the Eskimo. These concerns, while important, should not be overriding.

The most important deficiency of the Draft EIS is its failure to consider any alternatives other than the two extreme positions of defying the IWC or halting whaling for an indefinite period. This position creates an unnecessary dilemma. Instead, the EIS should examine the possibility of accepting the IWC hunting moratorium for some specified period while a research and management program is instituted. It appears possible that such a program could be put into effect before the December meeting of the IWC;

Mr. William Jensen
September 22, 1977
page three

in that case, the IWC might revoke its deletion of native exemption from the hunting ban. Such a plan could certainly be prepared before the regular IWC meeting in June 1978; this timetable would require that the Eskimo sacrifice only the spring hunting season. Any research-management plan, of course, would have to address the concerns raised by the IWC. Thus, it would have to include more effective methods for determining the number of whales in the Bering Sea, their reproduction rate, and environmental factors affecting their survival. It would also have to contain, at a minimum, take quotas for each village and measures to reduce the unacceptably high lost/landed ratio. A less comprehensive program, or a mere promise to institute such a program in the future, cannot be expected to persuade the IWC to change its decision.

The United States has long urged other countries to protect endangered species under their jurisdiction, despite economic hardship which might result. Consistency requires that it abide by the same policy in managing its own species. Furthermore, the loss need not be great. We believe that the third alternative outlined above is a solution to the dilemma in which the United States now finds itself. This approach would assure necessary protection for the bowhead whale, limit the damage to U.S. international conservation policy, and minimize the hardship for the Eskimo community. We urge you to consider this option in your decision-making.

Sincerely,



Faith Thompson Campbell, Ph.D.
Research Associate



S. Jacob Scherr, Esq.
International Project

cc: Secretary of State Cyrus Vance
Secretary of Commerce Juanita Kreps
Administrator Richard Frank
Mr. John R. Twiss, Jr.
Mrs. Christine Stevens
Mr. Toby Cooper
Mr. Craig van Note
Mr. Lewis Regenstein

FTC/ps

Response to comments received from Natural Resources Defense Council, Inc.

7. It is acknowledged that the data base on bowhead whales is weak. NMFS is currently expanding existing research programs and developing new research programs to provide the needed information.
8. The final impact statement attempts to address only the impacts of a 1 year deletion of the native exemption. The matter will be on the agenda of the 1978 IWC meeting.

7936 La Riviera Drive, #177
Sacramento, CA. 95826
September, 18, 1977

Office of Fisheries Management
National Marine Fisheries Service
Department of Commerce
Washington, D.C.

Dear Sir:

I am a wildlife biologist and also an attorney in California. I have recently completed a three year study of international whale management which has been published in the Ecology Law Quarterly (Vols 6, No.'s 2 & 3). I have reviewed nearly all the scientific literature on bowhead whales and have talked to most of the scientists with first hand experience of the problem. I have enclosed comments concerning the draft environmental impact statement on the International Whaling Commission's deletion of the native exemption for the subsistence harvest of bowhead whales.

Before I list my specific comments, I wish to make a few general comments. The most important issue is not possible hardship to the Eskimos nor possible loss of face of the United States delegation to the IWC. The most important issue is clearly the future survival of the bowhead whale. The bowhead is taxonomically, ecologically, and probably behaviorally, one of the most unique and poorly known large whale species. Without any argument, scientists agree that the survival of the entire species is seriously threatened by any whaling, no matter how regulated. The federal government and Eskimos have spoken passionately about the hardships they would suffer if an objection is not filed, yet it is these groups that have brought these hardships upon themselves by their carelessness over the last decade. Had the government launched a more comprehensive and serious research effort when requested to do so by the IWC five years ago and had the Eskimos voluntarily reduced their catch and ~~increased~~ the efficiency of landing struck whales, then I would have greater sympathy for their current plight. What must now be our first priority is ensuring the continued existence of bowheads both for the Eskimos and the scientists. Such a commitment necessarily involves prohibiting current Eskimo whaling.

1) The most damning omission from the DEIS is any evidence as to the sustainable yield of the bowhead population. This data was omitted because no such data exists. There is no scientific evidence to suggest that there is any harvestable surplus. Several scientists have speculated that the bowhead



can withstand a harvest of around 5% of the present population, but this speculation is based upon experience with whales of different taxonomic families at much higher population levels. The situation most clearly analogous to the bowhead's status is the status of black right whales (*Eubalaena glacialis*) in the North Atlantic and North Pacific, which, despite over 40 years of protection from both commercial and aboriginal taking, have failed to show any signs of recovery. Had this species, the bowhead's closest taxonomic relative, increased at the rate the bowhead is supposed to be increasing, then there would have been a dramatic increase in its abundance over this long period.

Returning to the 5% figure, it should be noted that this is the maximum harvest rate allowed by the IWC for Initial Management Stocks which are at high population levels and in no danger of extinction. Applying this 5% figure to the minimum estimated bowhead population of 850 (p. 22), this generates a surplus of 42 whales. This figure must be adjusted downward, for the 5% figure assumes that the whaling mortality will be at least partially compensated for by a decrease in natural mortality rates among adults. However, the Eskimo whaling effort is so selective for immature whales that its effect is largely additive rather than compensatory to natural mortality. For these reasons an estimate of sustainable yield of 10-15 animals per year is both speculative and extremely optimistic.

2) p. 54, para. 1. It is stated that prohibiting Eskimo whaling "will allow for its the bowhead's more rapid recovery". This statement implies that bowheads would also increase if an objection were filed, but there is no evidence to suggest this latter idea is true. A more accurate statement would be that banning Eskimo whaling would allow "the best, and perhaps the only, chance for the bowhead to avoid extinction".

3) p. 55, para. 2. Although the grey whale is currently classified as "endangered" under American law and as a "Protection Stock" by the IWC, the population of the eastern Pacific stock of this species is probably as high as it has ever been in recorded history. It could certainly withstand a harvest of 30-40 more whales per year without immediate jeopardy. It should also be noted that the grey whale population is 12 to 15 times the size of the bowhead population.

4) p. 56, para. 3. It needs to be stated that eliminating Eskimo whaling completely for one or several years may be the only way to preserve bowheads and thereby the traditional Eskimo lifestyle. The threat to the Eskimo lifestyle caused by the extinction of the bowhead is far greater than that caused by a one or two year moratorium on Eskimo whaling. The possible long-run benefits to the Eskimo from a moratorium must be mentioned.

5) pp. 58-60, mitigating measures. One major, feasible means of mitigating the impact of a bowhead ban on the Eskimos has been completely overlooked. The federal government can operate or charter a whale catcher boat(s) to catch grey whales and provide them to the villages that depend on bowheads. Such an action would be permitted under para. 7 of the IWC Schedule. The main reasons for the Eskimo's traditional preference for catching bowheads is the latter's slow speed, gentle character, and habit of swimming close to shore. Grey whales migrate further offshore, are more dangerous to kill, and (I believe) tend to sink when killed. None of these would be a major problem for a modern whale catcher boat.

12

The advantages of such an action would be many. The whales could be delivered entire to the villages. The Eskimos could haul the whales out and flense them in the traditional manner. The meat could also be distributed according to local custom. The Eskimo diet would retain its essential high fat intake so health problems would be minimized. Some Eskimos could be used as crew on the catcher boats. Certainly some adjustments would have to be made in cultural practices, but the nutritional and social disruption caused by catching and utilizing grey whales in this manner is bound to be far less than that associated with flying in canned and dried food.

6) p. 61, para. 2. I think this section overstates the case for biological sampling. It implies that all reproductive studies will cease if samples cannot be taken. Aerial and shore-based surveys can be used, perhaps in combination with Eskimo whaleboat surveys to determine not only changes in abundance, but also adult-calf ratios.

The amount of useful information that will come from sampling Eskimo kills should not be overestimated. The samples are so small and biased that much, if not most, of the resulting data will have little statistical significance. It is also extremely unlikely that any such research will reveal means to increase the whales' birth rate or decrease their natural mortality rate. In other words, it may give us a better idea of how much native whaling the stock can withstand, but it will not reveal means by which we can stimulate the bowhead's recovery.

7) p. 61, para. 3. The report says that if the United States does object, "The assurance of the bowhead population recovery will be reduced accordingly". This is both euphemism and circumlocution. The sentence should read that "the risk of the bowhead becoming extinct will increase by a highly significant, but unknown, amount."

13

8) p. 62, para. 2. This section is terrible. First, it states that filing an objection "will have no adverse effect on Eskimo diet, subsistence economy, or culture." Because there is considerable evidence suggesting that failure to completely

protect bowheads will lead to their rapid extinction, it must be noted that filing an objection may very well destroy the biological base for traditional Eskimo culture in the near future with drastic dietary, economic, and cultural consequences.

Second, it is stated that an objection would be accompanied by federal regulation of the whale hunt to reduce the number of whales taken. In contrast to the "serious effects" of a total ban, this reduction would only have a "slightly depressing" effect on the Eskimos. In three sentences this paragraph has said that an objection would have "no adverse effect", a "slightly depressing effect", or perhaps a "serious effect" if the regulations were strict enough to provide any substantial protection for the whales. 14

Third, to repeat an earlier point, greater security for the Eskimos will come from more whales rather than more statistically valueless data.

9) p. 63, para. 2. This section needs to be greatly expanded to present an accurate picture of the political context of the proposed action. Scientists from other nations, particularly Japanese scientists are already convinced that United States' actions are politically, rather than scientifically, motivated. The United States has taken a very hard line demanding that full scale exploitation of Initial Management Stocks cannot begin until considerable scientific data has been accumulated. The United States has also insisted that other nations, particularly Japan and Russia, abide by the IWC Scientific Committee recommendations even when there are legitimate differences of scientific opinion on sustainable yields, the stock is in no immediate danger of extinction, and the recommended quota cuts will have massive economic repercussions. Examples of such actions are the complete protection for all fin whale stocks in the southern hemisphere and north Pacific and this year's reduction of the north Pacific sperm whale quota by 90%. If the United States insists that other nations abide by the recommendations of a divided Scientific Committee, it cannot then formally object to the unanimous recommendation of the Scientific Committee on the bowhead issue.

In addition, the United States has taken the position with the IWC that any member nation can adopt regulations more restrictive, but not less restrictive, than IWC regulations to apply to all whale catchers within the member nation's exclusive economic or fisheries zone. The United States has adopted such regulations with regard to both sperm and Bryde's whales within 200 miles of its shores. This will cause economic hardship to both Russian and Japanese whalers. If the United States objects to the elimination of the bowhead exemption, it will appear to be applying a more lax standard to itself than to foreign countries.

10) p. 67, para. 1. Access to these camps is not entirely limited to snowmobiles. Both fixed-wing aircraft and helicopters can conduct aerial surveys of the camps and any evidence of a butchered whale should be apparent. In many cases, helicopters can provide a quick means of access to the camps, albeit an expensive means.

15

The relevance of the enforcement section should be carefully examined. There will be enforcement problems with any regulations adopted restricting Eskimo whaling. It seems appropriate to include a far more detailed discussion of current and proposed commitments of manpower and funds for enforcement purposes.

16

11) p. 68, para. 2. I think the idea of a native liason group is a good one. It should have been formally tried five years ago when the IWC suggested it. There is no evidence presented suggesting that the Eskimos are receptive to such an idea, or that such a group would have adequate authority within the villages to ensure compliance with any regulations. The time to experiment with such self-regulatory schemes has passed.

17

12) p. 71, para. 3. This paragraph completely misses the point. It states: "Depending on the action taken, either a native culture or U.S. conservation efforts may be irreversibly or irretrievably committed. . ." The point of the entire DEIS should be to manifest that the future survival of the bowhead whale is at stake and that filing an objection to the IWC decision is likely to irreversibly and irretrievably condemn the bowhead to extinction.

18

In conclusion, the long-term survival of the bowhead should be the paramount goal. This survival is essential for the perpetuation of the Eskimo culture. The scientific evidence is overwhelming in demonstrating the urgency of the situation. The world's foremost whale experts unanimously agree on the need for complete protection. The United States government cannot in clear conscience object to the IWC action.

Will you please send me a copy of the final EIS on this matter. Thank you for considering my views.

Sincerely yours,


James E. Scarff

cc: Ken Hampton
Scott McVay
Christine Stevens
Maxine McCloskey
Friends of the Earth

Response to comments received from Mr. James E. Scarff:

9. The text of the final EIS has been amended.
10. Additional information concerning the gray whale has been provided in the final EIS. Although the meat of the gray whale is an acceptable food, the barnacle encrusted muktuk is not.
11. The text of the final EIS has been amended.
12. This suggestion has been incorporated in the text of the final EIS.
13. An additional phrase has been added to the sentence, so that it now reads, "The assurance of the bowhead population recovery, if recovery from an endangered status is still possible, will be reduced accordingly....."
14. The text has been amended.
15. The text of the EIS has been amended to reflect this comment.
16. A comprehensive enforcement plan is currently being developed.
17. On August 31, 1977, a conference of whaling captains representing all whaling villages met and formed the Alaska Eskimo Whaling Commission. It is hoped that this newly formed association will assist the Federal Government in the development and implementation of regulations on native whaling as well as assist Government scientists conducting bowhead whale research.
18. The text of the final EIS has been amended.

JH

MARINE MAMMAL COMMISSION
1625 EYE STREET, N. W.
WASHINGTON, DC 20006

23 September 1977

Mr. Robert W. Schoning
Director
National Marine Fisheries Service
NOAA, Department of Commerce
Washington, D.C. 20235

Dear Mr. Schoning:

We have reviewed the draft environmental impact statement on the International Whaling Commission's Deletion of Native Exemption for the Subsistence Harvest of Bowhead Whales and offer the following comments for your consideration in preparing the final environmental impact statement:

Page 5:

The discussion of the description of the proposed action should be expanded to include consideration of a course of action that would involve reconsideration of the bowhead matter at the special meeting of the International Whaling Commission in December 1977, before the subsistence hunt for bowhead whales would commence in the spring of 1978. This course of action is discussed in greater detail below.

19

Page 16:

The first paragraph should be modified. The MSY stock level for baleen whales is considered to be 60 percent of initial size, not 50 percent. The second and third sentences in the first paragraph should be deleted and the following inserted: "The MSY stock level for baleen whales is considered to be 60 percent of initial size. Total protection for baleen whales therefore begins when the stock is 54 percent or less of its initial size. The Bering Sea stock of bowhead whales is roughly, at best, only 10 percent of its initial size, and therefore clearly within the protection category."

20

Page 17:

For clarity, it would appear desirable to delete "James Bay" from (2) and to replace it with "Hudson Bay" and to re-write the sentence following the list of principal areas as follows: "Mitchell (1977) recognizes five stock areas, considering the Hudson Bay population to be isolated (after Ross, W. G. 1974. Distribution, migration, and depletion of bowhead whales in Hudson Bay, 1860 - 1915. Arctic and Alpine research 6(1): 85-98)."

21

Page 25:

This discussion should indicate that no whales were taken for Soviet Eskimos in 1976 and that the Soviet representative at the IWC voted for the zero quota in the plenary session of the Commission meeting.

22

Page 28:

Here and elsewhere the discussion should clearly state what is meant by "take" or "harvest". Table 2 indicates the number of bowhead whales retrieved or landed. The third full paragraph on this page and other discussion should be re-written to refer to retrieved take and add reference to Table 5 for the total take -- retrieved and unretrieved. In addition, the second sentence in the third full paragraph on this page should be modified by adding the phrase ", 2 killed but lost, and 77 struck and lost.", in order to present the full information clearly.

23

Page 32:

The last sentence in the first full paragraph on this page should be modified to indicate that the "record autumn kill" means the highest retrieved kill in any autumn hunt on record. Some additional language should be added to indicate that the numbers taken -- retrieved and unretrieved -- in the 1977 spring hunt exceeded the total taken during both the spring and fall hunts in any previous year.

24

Page 35:

With respect to the discussion in the middle paragraph on this page, we know of no data that would serve as a basis

for evaluation of the effects of a 15 to 18 inch long bomb that passes through or is lodged in the body of a bowhead whale. Data should be presented, if they are available, concerning how often, if ever, whales are landed and found to be harboring an unexploded bomb. This would constitute evidence for the suggestion that some whales survive after being struck but lost. Absent such information, one might expect the occurrence of a non-fatal injury but one might also expect the occurrence of a fatal injury. The discussion suggests that about half those whales which are struck and lost may have died, apparently based on observations that bombs did explode in about half of the whales struck and lost in the 1977 spring hunt. But some or all of those whales which were struck by bombs which did not explode may also have died and the number of whales that died after being struck and lost may therefore be considerably more than one-half the total number struck and lost.

25

Pages 39 - 53:

As a general comment, it is very important to be sure that the DEIS makes it clear that the decision under consideration technically involves only the spring 1978 hunt. The quota for bowhead whales, as part of the schedule, can be raised at subsequent meetings of the IWC for reconsideration. This is a difficult matter since the future actions and decisions of the IWC with respect to this question cannot be predicted with any certainty and the readers of the DEIS should not be misled into thinking that there is any way of predicting future quota levels. It is, however, important to recognize that the only action that can be evaluated is the action of IWC and our response to it with respect to the spring 1978 hunt. The impacts of future decisions by IWC will have to be evaluated when they are reached.

26

Page 40:

Here and elsewhere, the discussion should note that the total number of whales landed and available to all native villages has been near zero in some years, presumably as a result of weather conditions and other factors. Table 2 indicates that the total number of whales available to all villages was 5 in 1948 and 1949, 2 in 1952, 4 in 1954, 5 in 1955, 3 in 1957, 2 in 1958, 1 in 1959, and 4 in 1967.

27

The reference to the "declining subsistence resources" on page 49 is significant and should probably be discussed further at some point in the DEIS. The information presented in the DEIS documents the importance of bowhead whales and other wildlife to the Eskimos and there is a suggestion that the growing Eskimo population will give rise to an increasing demand for such wildlife. If the growing native communities in Alaska are to continue to have "basically subsistence economies", as suggested on page 50, then a stable population of whales and other wildlife is essential to the continuation of their culture and the DEIS should note that the stability, and even the viability, of the bowhead whale population appears to be severely threatened by the present hunting regime.

Page 54:

The discussion under Section A.1, Impact on Bowhead Whale, understates the risks that result from a harvest level that exceeds the maximum recruitment to the population. Under such circumstances, it is not only unlikely that the endangered population will increase, the population will decrease further toward extinction. In addition, the risks to an endangered population which is maintained at low levels is significant and present, even in the absence of pressure from such factors as hunting, as discussed in Appendices C and D. In addition, the last phrase in paragraph 1 on this page should be changed to add "if such recovery from endangered status is still possible", as discussed in Appendix C.

28

Pages 54 - 56:

Here again, it should be noted that this action that is being evaluated relates to one season and the extent of the pressure on other marine mammals which may result from a zero quota in the spring of 1978 cannot be accurately predicted. Also, it would appear that the hunting of most other marine mammals would probably be undertaken to provide a food substitute rather than as a substitute for cultural or economic (handicrafts) values which presumably cannot be served by seals and other marine mammals in the same fashion that they are served by the bowhead whale.

29

Here again, the statement in paragraph (a) appears to be based upon an assumption that there will be no hunting for more than just the spring 1978 season.

30

The discussion of research in the second paragraph on this page is confusing and may be misleading. If the U. S. does not object, killing of bowheads will be illegal, except pursuant to a scientific research permit. Although such a permit might be available, it should be made clear that research on reducing loss rates will not serve to enable the hunt to continue in the spring of 1978.

31

The discussion under paragraph 4 of future research should include reference to the strengthened and expanded research program which we recommended by letter to you dated 14 September 1977. As you know, the recommended research program contemplates as much cooperation and involvement of Eskimos as possible.

32

The first sentence in paragraph B.1 to the effect that native subsistence taking of bowhead whales will continue, is not necessarily true and this section on the impacts if the U. S. does object should be modified. Regulations promulgated under the Marine Mammal Protection Act may result in restrictions on the methods of taking as well as the numbers, age, sex, size, and location of whales that may be taken. These regulations could result in a quota of zero. It is impossible at this time to predict the substantive content of those regulations and it is therefore inappropriate to suggest that hunting will necessarily continue. Neither the natives nor anyone else should be misled or given undue cause to believe that an objection will assure that hunting will continue.

33

This discussion should be expanded. The discussion in paragraph (a) should be expanded to include reference to the fact that decisions urged by the United States over the past several years have resulted in major reductions (60 percent)

34

in the total quotas and have caused severe socio-economic impacts in other countries such as Japan, whose representatives argued unsuccessfully that the importance of whaling and whale meat to the culture, diet, and employment in Japan should not be impaired by restrictive quotas. With respect to paragraph (b), the discussion should note that objections by other nations could extend to quotas in future years and thereby further frustrate conservation efforts and the conservation of whale populations.

35

Generally, with respect to this discussion, it should be noted that the effectiveness of threatening an embargo of fishery products under the Pelly Amendment would be reduced as a result of filing an objection with the IWC. The threat of invoking this major sanction appears to have contributed to dissuading member nations from objecting and encouraging non-member nations to join the IWC and/or comply with IWC quotas. The filing of an objection would make it difficult for the U.S. to argue that objecting to IWC quotas diminished the effectiveness of the international conservation regime. Such an action would also reduce the availability of this sanction in other fora such as the Inter-American Tropical Tuna Commission.

36

Pages 70 and 71:

The discussion under V, Unavoidable adverse environmental effects, should be supplemented to indicate that other whale populations and environmental values could be jeopardized to the extent that U. S. efforts are impaired and international conservation measures suffer.

37

The discussion under VII should also be expanded to clarify, as suggested earlier, that the native take of bowhead whales may be restricted even if the U. S. files an objection and that a commitment with respect to restrictions and their impacts upon native culture is not entirely dependent upon whether or not the U. S. files an objection.

38

Appendix C:

Some explanation should be provided so that it is clear to the reader that the "proposed addition to the report on the bowhead whales as requested by U. S. Commissioner" contained in this appendix was provided by the Scientific Committee of

the IWC in response to a request by the U. S. Commissioner for further information as to why some level of subsistence taking above zero could not be permitted. I suggest that it would be appropriate to include the text of the U. S. Commissioner's statement as an appendix.

39

Finally, the DEIS should be expanded to include a discussion of the opportunity to report on efforts by the U. S. relating to the bowhead issue and seek a reconsideration of the matter at the special meeting of the IWC in December 1977, before the spring hunt commences in 1978.

The discussion should indicate that the IWC agreed at its meeting in June that a special meeting of the Scientific Committee would be held in November 1977 to consider the North Pacific sperm whale quota and that a special meeting of the Commission would be held thereafter unless the Chairman of the Commission determined that the recommendations of the Scientific Committee concerning sperm whales did not justify calling such a meeting, in which case the Chairman could cancel the special meeting.

The discussion should indicate that although the discussion at the June meeting of the IWC clearly indicated that the special meeting was to be limited to a consideration of the sperm whale quota, the proposed agenda for that meeting which was recently received includes items other than the sperm whale quota and that the Secretary has invited member nations to add items to the agenda.

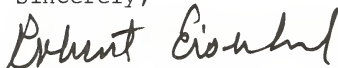
In light of this opportunity, the DEIS should be expanded to include discussion of a course of action as an alternative to those described which would involve placing the bowhead issue on the agenda of the special meeting in December. Although it is not possible to predict the response of the IWC, it is reasonable to believe that a detailed and convincing presentation of a comprehensive bowhead whale research and protection program would be seriously considered at the special meeting. Such a program should include, at least, the following elements: (1) a full commitment by the federal government to immediate implementation of an intensive research program such as that contained in our recommendation of 14 September 1977; (2) detailed reports of the level of retrieved and unretrieved take in the course of the hunt this fall and progress in reducing loss, limiting total kill, and collecting biological

samples; and (3) a commitment by the Eskimos and federal government to a detailed regime which will serve to control methods, numbers taken, and other aspects of any hunt that might be permitted and thereby minimize the threat to the population resulting from any taking.

The development of the details of such a course of action would, of course, require the intensive cooperative efforts of the Eskimos and federal government in the immediate future so that a proposal could be presented by the U. S. delegation which, hopefully, would include an Eskimo representative. If such a convincing package can be developed, it is possible that the IWC might choose to restore the exemption to take bowhead whales for subsistence, subject to the conditions relating to controls, research, and such other factors as may be appropriate.

I hope these comments will be of assistance to you.

Sincerely,

A handwritten signature in dark ink, appearing to read "Robert Eisenbud", written in a cursive style.

Robert Eisenbud
General Counsel

Response to comments received from Mr. Robert Eisenbud, Marine Mammal Commission:

19. The text has been amended to reflect this information.
20. The text of the final EIS has been corrected to reflect this comment.
21. The text of the final EIS has been amended to reflect this comment.
22. The text of the final EIS has been amended.
23. The text of the final EIS has been amended.
24. The text of the final EIS has been amended.
25. Data are not available; the text has been amended to reflect that the 50% figure used for the struck and retrieved animals that subsequently died represents the "best" estimate used by the Scientific Committee.
26. This matter is discussed on page 5 of the EIS. Additional phrases indicating a one-season prohibition are included in the final impact section.
27. The text of the final EIS has been amended.
28. The text of the final EIS has been amended.
29. The text of the final EIS has been amended.
30. The text of the final EIS has been amended.
31. The text has been amended to indicate that a limited number of bowheads may be available in connection with essential research.
32. The recommended bowhead research program has been included as an appendix to the final EIS. Reference is made to this appendix in the text of the final EIS.
33. The presumed basis for an objection would be an effort to preserve a unique U.S. culture which is dependent upon a bowhead harvest. Regulation of the native subsistence harvest under the MMPA can be promulgated only if the bowhead is declared depleted which has not been done at this time. It is speculative to presume the outcome of any regulatory proposal whether it be formal under the NMMPA or WCA, or voluntary on the part of the Eskimos. The text has been amended to reflect the speculative nature of future undefined actions.

34. The text has been expanded.
35. It is believed that section (c) on page 64 of the DEIS adequately addressed this comment.
36. Additional information has been incorporated in the text.
37. The text has been supplemented.
38. The text has been supplemented.
39. Additional material has been incorporated in the text, and in Appendix C.

EXECUTIVE OFFICE OF THE PRESIDENT
COUNCIL ON ENVIRONMENTAL QUALITY
722 JACKSON PLACE, N. W.
WASHINGTON, D. C. 20006

SEP 27 1977

September 23, 1977

Dr. William Aron
Room 5813, NOAA
Department of Commerce
Washington, D.C. 20230

Dear Dr. Aron:

The Council on Environmental Quality would like to associate itself with the comments made by the Marine Mammal Commission regarding the environmental impact statement on the International Whaling Commission's deletion of the native exemption for the subsistence hunting of bowhead whales. We would like to see this information reflected in the final EIS.

We believe that the international impacts of filing an objection are understated in the draft EIS. Instead of saying that this "could" undermine worldwide whale conservation efforts, it would be more realistic to say that it "would" or "almost certainly would." Everyone that we have spoken to who is familiar with the workings of the International Whaling Commission believes that the impacts would be severe, and that the Soviets and Japanese probably would begin once again to disregard some of the findings of the Scientific Committee and to file objections of their own to quotas set on other whale species.

The list of international agreements on other subjects that would be adversely affected should include the Law of the Sea negotiations.

The statement also needs to stress the crucial role of the Scientific Committee in setting quotas that could be agreed upon, because nations that would not normally vote with the United States for political reasons feel able to support the recommendations of the Scientific Committee.

The international background should also indicate that the IWC has in the past set quotas or established regulations for the aboriginal taking of humpback whales by Greenland natives and grey whales by the Soviets. The U.S. initiated one of these provisions, which would suggest that the U.S. does recognize the IWC's authority regarding aboriginal take, and increases the danger that the U.S. will be perceived as hypocritical if it objects to the zero quota for bowheads. This ban also applies to Canadian and Soviet natives, but Canada voted in favor of the zero quota.

The EIS should also point out that this is the first time that the U.S. has been asked to make any significant sacrifice on behalf of whale conservation, and that the other whaling nations have already accepted cuts in quotas that have cost them roughly half a billion dollars since 1972, and thousands of jobs. The U.S. decision on the bowhead will probably be viewed as a test of our sincerity and commitment.

The EIS should stress that continued unregulated hunting of the bowhead will not only make recovery of the species unlikely, but will probably cause a further decline in population and a much greater threat of extinction. This would of course have a far greater impact on the eskimo's culture than failure to hunt for one or two seasons.

Whenever the EIS describes the impacts on the natives of not filing an objection, it should make it clear that we are talking about only one season, the 1978 spring hunt. Once the natives and the U.S. present a workable plan for regulating future hunts and reducing the number of whales that are struck and lost, we expect that the IWC would agree to a small quota instead of a ban on hunting bowhead. Even if the IWC did not agree to this, the U.S. will once again have an opportunity to object, every year that a zero quota is imposed. A decision not to object this fall is binding only for the spring hunt.

It should be noted that in some seasons in past years the natives have been unable to kill any bowhead because of adverse weather or thick pack ice. The native culture has survived these lean years. The intense native opposition to a moratorium is caused not only by the deprivation of the whale, but also resentment of interference by the white man. This is not intended to downplay the very real cultural hardship that the eskimo would face if deprived of the bowhead for a season.

The draft EIS mentions that the eskimos will hunt more beluga whale as an alternative to the bowhead. This is discussed in the context of additional pressures on other wildlife populations that would result from a moratorium on the bowhead, but not as an alternative source of nutrition and physical exercise, and some of the psychological needs served by the whale hunt. Although the beluga whale is not as highly prized by the eskimo, it could serve as a partial and temporary substitute for the bowhead. Beluga populations are not nearly as depleted, nor would an additional take of belugas have the same international consequences as an objection to the IWC decision on the bowhead. In the event that the beluga is not available in sufficient numbers to satisfy subsistence needs, the EIS might consider the possibility of the U.S. importing some minke whale meat to directly compensate the natives in a way that is more acceptable to them than existing welfare programs. This option, if adopted, must be made consistent with existing laws.

The U.S. will find it extremely difficult to enforce the zero quota completely, especially in the remote villages. If appropriate, the EIS might seek to compare the international consequences of an only partially successful enforcement of the quota, as opposed to the U.S. filing an objection. It is our impression that the other nations would respond more favorably to a sincere enforcement effort even if it were not successful.

These comments are not intended to be comprehensive in any way, nor are they intended as any kind of judgment on the adequacy of the existing draft EIS. They are merely a few ideas offered in the hope that they will be helpful to the Department in writing the final EIS.

Sincerely,

A handwritten signature in dark ink, appearing to read "Marion Edey". The signature is fluid and cursive, with the first name "Marion" written in a larger, more prominent script than the last name "Edey".

Marion Edey
Member Designate



Project JONAH

Box 476, Bolinas, California 94924 U.S.A. - Telephone [415] 868-0646
NEW ADDRESS: Bldg. 240 Fort Mason, San Francisco, 94123

775-3472

SEP 2 1977 September 22, 1977

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Dr William Aron

National Oceanic and Atmospheric Administration

U.S. Department of Commerce

Washington, D.C. 20235

Dear Bill:

I am writing to you about the bowhead whale situation. From the perspective of having served as a member of the U.S. delegation to the International Whaling Commission in June, 1977, I very strongly urge the United States government not to issue an objection to the bowhead whale decision. For the United States to do so would severely weaken the credibility of our country in international wildlife matters, and would put in doubt the achievement of the two primary goals: preservation of whale populations and preservation of the whale-hunt customs of Alaskan Eskimos.

The recent killing of bowheads in Alaskan waters has become intolerably wasteful and has increased at a drastic rate. The population of bowheads is not known, but is suspected of being less than one thousand. The wasteful and unregulated activity by U.S. Eskimos cannot be tolerated. Even if the IWC had not made the decision requiring a zero take during the next year, it would have been incumbent upon the Federal Government to make a similar decision on the basis of the mandate in the Marine Mammal Protection Act. This allows an exception for native subsistence taking, but only if it is not wasteful. I urge you to do your duty as a servant of all the citizens of this country and enforce the Marine Mammal Act, and abide by the decision of the IWC.

It could be said that the situation in Alaska was allowed to build up because the Federal Government did not take steps along many lines that it was required to do under the Marine Mammal Act, and under direction by the International Whaling Commission. As a result, the government has little biological

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data, little population data, and has neglected establishing a working and effective relationship with the affected Eskimos. The situation was allowed to drift along until we are presented with a crisis. It appears now that the Eskimos have taken responsible steps to find ways to cope with the situation in the future--to aid in research, and to find ways to regulate their activities and their impact on the bowheads. This is to be applauded, and is a very encouraging sign that this crisis need not last long.

While observing a zero take next spring, I would suggest that the Federal Government fly in to villages that would have hoped to kill a bowhead the beheaded carcasses of walrusen that are cast about on Alaskan shores. This could serve as a temporary substitute for bowhead whales until an agreement can be worked out between the federal agencies involved and the Eskimos that would be reasonable enough to allow true subsistence hunting to commence again. I might remind you that the IWC will consider the whole question of subsistence hunting at its next meeting. For the United States to try to evade instruction from the IWC by issuing an objection on this issue would serve as a very damaging example.

One other related matter on this question. The issues are the survival of bowhead whales and the survival of native customs. I submit that the native whale-hunt customs cannot survive if the whales don't survive. A temporary moratorium on subsistence whaling is no different than the moratorium many advocate on commercial whaling. It allows for research, for formulation of allowable quotas based on sound population and biological data, and it allows time for the Eskimos to devise their regulations and allocations for whatever numbers of whales could be safely taken from that most severely depleted species. I understand that sometimes because of weather or other conditions, a season of the whale hunt has been totally unsuccessful, but the Eskimos managed to keep their food preferences and hunt traditions intact.

For the reasons of protecting the whales, protecting the food source and customs of Alaskan Eskimos, demonstrating the sincerity of commitment that the U.S. has to whale conservation, and demonstrating its commitment to international law, I urge the United States government not to issue an objection to the IWC, but to work out with the Eskimos some kind of agreement to provide alternative food while a sound cooperative regulation and research program is being devised.

Sincerely yours,
Maxine
Maxine McCloskey,
President

Response to comments from Maxine McCloskey, Project Jonah:

40. See response to Comment No. 1.

ROGER PAYNE
429 EAST 64 ST
NEW YORK NY 10021

 **Mailgram®**
western union



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SEP 26 1977

WILLIAM ARON
NATIONAL OCEANOGRAPHIC AND ATMOSPHERIC
ADMINISTRATION, DEPT OF COMMERCE
WASHINGTON DC 20230

TITLE: COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT
SUBMITTED BY: DR ROGER S PAYNE, RESEARCH ZOOLOGIST, NEW YORK ZOOLOGICAL
SOCIETY, AND AFFILIATE ASSOCIATE PROFESSOR, ROCKEFELLER UNIVERSITY, NEW
YORK, NEW YORK

1. THE DRAFT EIS NOTES HOW DIFFICULT IT WOULD BE TO FIND AN ACCEPTABLE
NUTRITIONAL SUBSTITUTE FOR BOWHEAD WHALE MEAT. THERE IS ALSO
CONSIDERABLE DISCUSSION OF HOW IMPORTANT THE ACTIVITIES ASSOCIATED WITH
ICE CAMPS ARE, THE IMPLICATION BEING THAT UNLESS THE U.S. FILES AN
OBJECTION THE CAMPS WILL NOT BE SET UP. THIS IS AN ERROR, AS NOTED
ELSEWHERE IN THE DRAFT EIS THE ESKIMOS TAKE SEALS, BIRDS, FISH AND
BELUGA WHALES FROM THE SAME CAMPS (THESE BEING THE MAIN MARINE FOODS
THAT HAVE SUSTAINED THE ESKIMOS IN POOR WHALING SEASONS). ESKIMOS CAN
BE EXPECTED TO SET UP ICE CAMPS EVEN IF THEY DO NOT HUNT BOWHEADS FROM
THEM. BELUGAS ARE A PREFERRED FOOD OF ESKIMOS AND CONTAIN THE SAME
NUTRITIONAL REQUIREMENTS (FATS, VITAMINS, ETC.) AS DO BOWHEADS. BELUGAS
ARE NOT ENDANGERED, IN FACT THEY ARE PROBABLY CURRENTLY HARVESTED BY
ESKIMOS WELL BELOW MAXIMUM SUSTAINABLE YIELD. AS BOWHEADS MIGRATE NORTH
IN SPRING THEY ARE ACCOMPANIED BY BELUGAS IN GREAT NUMBERS. SEVERAL
BIOLOGISTS HAVE REPORTED ON THESE ASSOCIATIONS.

THE ESKIMOS LAND VERY FEW BELUGAS BECAUSE BELUGAS OFTEN SINK OR ARE
LOST BEHIND ICE FLOES WHEN SHOT BY RIFLE (THE ALASKAN HUNTING
TECHNIQUE). A SHOULDER FIRED HARPOON (AS IS USED BY CANADIAN ESKIMOS IN
HUNTING BELUGAS) COULD SOLVE THIS PROBLEM AND PROVIDE AN ABUNDANT
NUTRITIONAL (AND OTHERWISE ACCEPTABLE) SUBSTITUTE FOR THE ESKIMOS.

2. THE DRAFT EIS NOTES THAT ADJACENT VILLAGES SHARE RESOURCES WHEN ONE
OF THEM FAILS TO LAND A WHALE. THIS SEEMS OVERSTATED AS THE DISTANCES
BETWEEN MOST WHALING VILLAGES ARE HUNDREDS OF MILES. BEFORE THE
INTRODUCTION OF NON-ESKIMO TRANSPORTATION METHODS APPEARED, THESE
VILLAGES COULD NOT HAVE TRANSPORTED SIGNIFICANT QUANTITIES OF MEAT
BETWEEN THEMSELVES BY TRADITIONAL MEANS. YET THE CULTURE REPEATEDLY
SURVIVED ONE OR MORE YEARS WITHOUT A BOWHEAD CATCH. THE ESKIMO CULTURE
SEEMS MUCH MORE RESILIENT THAN THE DRAFT EIS STATES. A GENERAL COMMENT
WOULD BE THAT THERE PROBABLY IS NO ANTHROPOLOGICAL TEST THAT WOULD BE
SENSITIVE ENOUGH TO DETECT THE CULTURAL EFFECT OF LOSING A WHALE HUNT
FOR A SINGLE YEAR, YET THE DRAFT EIS REPEATS THE CLAIM THAT MUCH WOULD
BE LOST WITHOUT PROVIDING ANY EVIDENCE THAT THIS IS SO, OR NOTING ANY
MEANS BY WHICH SUCH LOSS MIGHT BE ASSESSED. SUCH CLAIMS IMPLY A

► FRAGILITY TO ESKIMO CULTURE WHICH MAKE IT SEEM A FLIGHTY, POORLY ADAPTED THING.

3. NO WHERE IN THE DRAFT EIS IS IT POINTED OUT THAT IF WE DO FILE AN OBJECTION AND FAIL TO ACHIEVE A MEANINGFUL REGULATION OF THE BOWHEAD HUNT (SO THAT THE BOWHEAD POPULATION IN FACT DECREASES) THAT THE RAPIDLY INCREASING POPULATION OF ESKIMOS WILL EVENTUALLY LOSE THE SUPPLY OF BOWHEADS ON WHICH THEIR CULTURE DEPENDS.

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4. THE DRAFT EIS NOTES THE DIFFICULTY OF GETTING MONEY INTO THE ISOLATED WHALING VILLAGES IN ORDER TO RAISE THE STANDARD OF LIVING. ONE WAY OF ACHIEVING THIS WOULD BE TO USE ESKIMOS THEMSELVES TO POLICE THE HUNTING RESTRICTIONS ON BOWHEADS. ONE OF THE UNSUPPORTED STATEMENTS IN THE DRAFT EIS IS THAT THIS POLICING CANNOT BE ACHIEVED. THE BOWHEAD HUNT IS LAUNCHED PARTLY TO PROVIDE STATUS WITHIN THE COMMUNITY. A SHERIFF'S BADGE IS A SIMILAR MARK OF POWER OR STATUS WITHIN A COMMUNITY. HISTORY ABOUNDS WITH EXAMPLES OF UNPOPULAR LAWS THAT WERE SUCCESSFULLY POLICED THROUGHOUT A WIDE VARIETY OF CULTURES. THE UNSUPPORTED CLAIM THAT ESKIMOS CANNOT POLICE THEMSELVES OR THAT POLICING CANNOT BE ACHIEVED STRIKES ME AS THE WEAKEST FEATURE OF THE DRAFT EIS. SURELY SELF REGULATION IS NOT SOMETHING WHICH ESKIMOS ARE UNABLE TO ACHIEVE. ONE DOES NOT EXPECT TO SEE PERFECT ENFORCEMENT WITH ANY LAW. BUT MEANINGFUL ENFORCEMENT IS NOT BEYOND THE REACH OF ESKIMOS EVEN IN THIS CRUCIAL ISSUE. THE EIS SEEMS TO IMPLY THAT IT IS AND AS SUCH DOES A GREAT INJUSTICE TO THE ESKIMOS.

44

5. PAGE 7 OF THE DRAFT EIS NOTED THAT BOWHEADS WERE NOT DESIGNATED AS "ENDANGERED SPECIES" UNTIL 1970. THOUGH TECHNICALLY CORRECT THE STATEMENT IS MISLEADING. BOWHEADS HAVE HAD TOTAL PROTECTION UNDER ALL INTERNATIONAL CONVENTIONS FOR WHALING SINCE THE 1930'S. THIS WAS ALWAYS IN RECOGNITION OF THEIR ENDANGERED CONDITION. THE TERM "ENDANGERED" MAY BE NEW TO WHALE LEGISLATION BUT AS A CONCEPT IT HAS EXISTED IN EVERY AGREEMENT SINCE EARLY IN THIS CENTURY.

45

6. PAGE 2 STATES THAT "IT IS UNLIKELY THAT THIS (SUBSISTENCE HUNTING FOR MARINE OR LAND MAMMALS, FISH AND WATER FOWL) COULD REPLACE THE BOWHEAD TAKE ON A BIOMASS BASIS". THIS ENTIRELY UNSUPPORTED STATEMENT COULD MEAN SEVERAL THINGS: AMONG THEM THAT THE NUTRITIONAL REQUIREMENTS COULD NOT BE FILLED FROM ALTERNATIVES TO THE BOWHEAD. HISTORY, HOWEVER, PROVIDES REPEATED PROOF THAT THIS IS NOT THE CASE SINCE ESKIMOS, AND THEIR CULTURE, HAVE REPEATEDLY SURVIVED ONE OR MORE YEARS WITHOUT BOWHEADS IN THEIR DIET. IN FACT ALL EVIDENCE INDICATES THAT STARVATION WILL NOT FOLLOW ON THE HEELS OF A REDUCED BOWHEAD HUNT. IF THIS CLAIM OF STARVATION HAS ANY EVIDENCE BEHIND IT THE EVIDENCE SHOULD BE STATED, IF NOT THE DRAFT EIS SHOULD MAKE IT CLEAR THAT THIS IS SUPPOSITION AND NOT A FACT.

46

ROGER PAYNE

20158 EST

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MGMCOMP MGM

41. We believe that the text of the DEIS concerning village participation does not imply this. This information is provided in the environmental setting section of the DEIS, not in the section on impacts.
42. The text has been amended to reflect that in some years, the number of whales available to all native villages has been near zero. (See Table 2). Testimony provided at the Alaska hearings indicated that sharing of whale products does occur between distant villages.

It is not possible to quantify the cultural impact of a one or more year prohibition on whaling.
43. Additional information has been incorporated in the text of the final EIS.
44. Page 68 of the DEIS mentions the possible establishment of a native group to cooperate with a Federal regulatory agency in applying regulations. We are aware of no statements in the DEIS that policing cannot be achieved. Statements are made that "there will, no doubt, be some problems associated with enforcing a total ban."
45. Page 6 of the DEIS lists the domestic and international regulatory background regarding the protection of bowhead whales from commercial whaling, and does mention the Convention for the Regulation of Whaling of 1931.
46. The statement in the text of the DEIS remains valid. There are no statements in the DEIS regarding starvation.



STATE OF ALASKA
OFFICE OF THE GOVERNOR
JUNEAU

September 20, 1977

Mr. Robert Schoning, Director
National Marine Fisheries Service
U. S. Department of Commerce
Washington, D. C. 20235




Dear Bob:

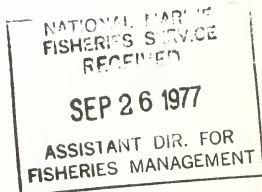
Two copies of the testimony given by Governor Hammond on the draft Environmental Impact Statement concerning the International Whaling Commission regulation prohibiting all take of bowhead whale at Barrow, Alaska, on September 12, 1977, are enclosed for the official record.

A copy of the Governor's testimony is also being provided to the recording service which was retained by the National Marine Fisheries Service to record the hearing at Barrow.

Sincerely,


Charles H. Meacham, Director
International Fisheries and
External Affairs

Enclosures



Handwritten signature
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL MARINE FISHERIES SERVICE

TESTIMONY

BY

JAY S. HAMMOND
GOVERNOR

ON THE

DRAFT ENVIRONMENTAL IMPACT STATEMENT CONCERNING
THE INTERNATIONAL WHALING COMMISSION
REGULATION PROHIBITING ALL TAKE OF BONHEAD WHALE

BARROW, ALASKA

SEPTEMBER 12, 1977

9:00 A.M.

159

THE BONHEAD WHALE ISSUE PLACES THE STATE OF ALASKA SQUARELY

ON THE HORNS OF A DILEMMA, WHICH HAVE EVERY INDICATION OF
GROWING BOTH LONGER AND SHARPER IF LEFT UNADDRESSED. THE

DILEMMA AS PRESENTED IN THE DRAFT ENVIRONMENTAL IMPACT

STATEMENT SEEMS AT FIRST TO BE A CHOICE BETWEEN TWO UNFAVORABLE

AND IRRECONCILABLE ALTERNATIVE EXTREMES: FIRST, DEPLETION

-1-

OF THE BONHEAD WHALE. OR SECOND, SERIOUS ADVERSE IMPACT UPON
THE CULTURE, HEALTH AND WELFARE OF ESKIMO WHALING COMMUNITIES
IN NORTHERN ALASKA.

FROM ALASKA'S VANTAGE POINT THE ISSUES ARE NOT SO CLEAR CUT.
THERE IS, INDEED, THE REAL POSSIBILITY - AND OBLIGATION - OF
SAVING OUR WHALES FROM EXTINCTION AND ALSO PROVIDING FOR THE
PEOPLE OF THE WHALING VILLAGES, HOWEVER, SUCH WILL REQUIRE
A HIGH DEGREE OF COOPERATION AND DEDICATED COMMITMENT FROM
ALL PARTIES.

THE RECENT ACTION OF THE INTERNATIONAL WHALING COMMISSION
HAS SERVED US ALL WITH FIRM NOTICE THAT ACTIVITIES OF THE
ESKIMO WHALERS ARE OF NATIONAL AND INTERNATIONAL INTEREST;
THAT THESE ACTIVITIES HAVE BEEN REVIEWED AND EXAMINED CLOSELY
BY THE COMMISSION; AND THE COMMISSION HAS CONCLUDED THAT THE

-2-

CURRENT IMPACT ON BOWHEAD WHALES IS ADVERSE, AND THAT CERTAIN PRACTICES ENGAGED IN (PERHAPS BY ONLY A FEW INDIVIDUALS, OR AT A FEW LOCATIONS), HAVE BEEN JUDGED AS UNACCEPTABLE BY THE COMMISSION. UNFORTUNATELY, SHOULD POOR JUDGMENT OR ABUSES ON THE PART OF SOME FEW HUNTERS OCCUR, THEY CAN PRODUCE CONSEQUENCES BORNE BY ALL ESKIMO WHALING COMMUNITIES.

I AM NOT HERE TO ARGUE OR DEBATE THE GENERAL MERITS OR SHORTCOMINGS OF THE DRAFT ENVIRONMENTAL IMPACT STATEMENT. SOME CONTEND THAT BOWHEAD WHALES ARE GREATLY REDUCED FROM THEIR FORMER NUMBERS, THAT THE MAGNITUDE OF RECENT CATCHES AND, MORE IMPORTANTLY, THE ANNUAL TOTAL KILL POSES A SERIOUS THREAT TO THE WHALES, WHILE AGREEING THAT THE WHALES ARE A MOST SIGNIFICANT PART OF A CULTURE WHICH HAS PERSISTED FOR MANY CENTURIES.

SUBSISTENCE HUNTING IS AN EXTREMELY IMPORTANT COMPONENT OF LIFE IN RURAL ALASKA. I HAVE REPEATEDLY STATED THIS ADMINISTRATION'S COMMITMENT TO THE CONCEPT THAT SUBSISTENCE HUNTING AND FISHING WILL HAVE PRIORITY OVER OTHER USES OF THE RESOURCES, WHERE APPROPRIATE. BUT SUCCESSFUL PERPETUATION OF THE SUBSISTENCE LIFESTYLE, AS DESIRED BY MANY PEOPLE, ALSO REQUIRES CAREFUL USE OF, AND RESPECT FOR, THE RESOURCES INVOLVED BY THE SUBSISTENCE USERS WHO DEPEND UPON THEM. THE INUIT PEOPLE ARE THE FIRST TO RECOGNIZE THIS OBLIGATION AS DEMONSTRATED BY LANGUAGE CONTAINED IN RESOLUTION NUMBER 77-16 PASSED AT THE FIRST INUIT CIRCUMPOLAR CONFERENCE HELD IN BARROW LAST JUNE WHICH READS IN PART: "NOW THEREFORE BE IT RESOLVED THAT THE DELEGATES ASSEMBLED AT THE FIRST INUIT CIRCUMPOLAR CONFERENCE CALL UPON ALL INUIT TO BEHAVE AS HUNTERS AND IN NO WAY THAT WILL CREATE SCANDAL AND ENDANGER OUR SUBSISTENCE HUNTING RIGHTS, AND TO CONSERVE OUR GAME AS WE

WOULD CONSERVE OUR HOMELAND, AND PROTECT FUTURE GENERATIONS OF OUR PEOPLE."

BASED UPON THE INFORMATION AVAILABLE TO ME, I AM CONVINCED THAT IF A PRUDENT AND COMMITTED BOWHEAD MANAGEMENT PROGRAM IS INSTITUTED, WE CAN PERPETUATE AND INCREASE THE STOCK OF THESE WHALES AND, AT THE SAME TIME, ALLOW FOR LIMITED TAKING WHICH IS SO VITAL AS A SOURCE OF FOOD AND SUSTENANCE TO THE ESKIMO WHALING CULTURE.

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SO LONG AS THIS CAN BE ACCOMPLISHED, ANY EFFORT TO TOTALLY ELIMINATE ESKIMO WHALING IN ALASKA IS PRECIPITOUS AND UNWARRANTED.

THE COMMISSION'S CONCERNS MAY WELL BE MET BY SOME MEASURES THAT HAVE ALREADY BEEN DISCUSSED BY THE WHALERS THEMSELVES IN THE DEVELOPMENT OF A CONSERVATION PROGRAM. SHOULD THERE

-5-

BE:

1. POSSIBLE ELIMINATION OF THE SHOULDER GUN FOR HUNTING

WHALES?

2. ELIMINATION OF THE USE OF VESSELS OTHER THAN SKIN

BOATS?

3. ESTABLISHMENT OF A TOTAL QUOTA FOR THE MAXIMUM

NUMBER OF WHALES THAT CAN BE TAKEN WITHOUT

JEOPARDIZING CONTINUED RECOVERY OF THE BOWHEAD

POPULATION?

4. EQUITABLE ALLOCATION OF THIS TOTAL QUOTA AMONG

THE WHALING VILLAGES, BASED ON CONSIDERATIONS OF

ACTUAL DEPENDENCE, AVAILABILITY OF OTHER RESOURCES,

AND ECONOMIC ALTERNATIVES?

5. DEVELOPMENT OF MORE DEPENDABLE AND EFFICIENT

WEAPONS WHICH INCORPORATE BOTH THE WHALE BOMB AND

HARPOON (WITH ATTACHED LINE AND POKES)?

-6-

6. ESTABLISHMENT OF AN ORGANIZATION OF WHALING CAPTAINS TO SET STANDARDS AND QUALIFICATIONS FOR CAPTAINS AND WHALING CREWS AND TO WORK TOWARD THE IMPROVEMENT OF ACCEPTABLE HUNTING METHODS?

AGAIN, I WOULD STRESS THAT THE ESKIMOS ARE THOSE WITH THE MOST DIRECT VESTED INTEREST IN THE FUTURE OF THE BOWHEAD WHALE. CONSEQUENTLY, TO THE MAXIMUM EXTENT POSSIBLE, WE SHOULD RELY ON THOSE ESKIMO WHALING CAPTAINS WHO HAVE TRADITIONALLY USED THE BOWHEAD AND WHO HAVE YEARS OF EXPERIENCE IN THIS AREA, TO DEVELOP CONSERVATION AND MANAGEMENT MEASURES, TO MAKE ALLOCATIONS, AND TO CURB ABUSES.

IN VARIOUS SECTIONS OF THE D.E.I.S. IT IS IMPLIED OR STATED THAT A PROHIBITION ON WHALING WOULD BE FOR ONE SEASON ONLY (Eg P.59). THE POINT IS STRONGLY MADE IN SEVERAL PLACES

THAT A SIGNIFICANT ADVERSE IMPACT OF FILING AN OBJECTION TO THE I.W.C. RESOLUTION WOULD BE TO REDUCE U. S. CREDIBILITY AS A MOVING FORCE IN INTERNATIONAL CONSERVATION EFFORTS, ONE CAN ONLY DEDUCE THAT A SIGNIFICANT REASON FOR ENFORCING A PROHIBITION WOULD BE TO "SAVE FACE" AND PRESERVE OUR NATIONAL POSTURE. IN THIS INSTANCE, THE ACTUAL COSTS INVOLVED TO ACHIEVE SUCH NEBULOUS RESULTS ARE NOT ACCEPTABLE.

MOREOVER, THE D.E.I.S. HAS NOT ADEQUATELY CONSIDERED THE FULL RELATIONSHIP BETWEEN THE WHALING CONVENTION (AND ITS COMPANION WHALING CONVENTIONS ACT) AND THE PROVISIONS RELATING TO NATIVES IN THE ENDANGERED SPECIES ACT AND THE MARINE MAMMAL PROTECTION ACT. I HAVE REQUESTED THAT OUR ATTORNEY GENERAL'S OFFICE INVESTIGATE THIS MATTER SO THAT ALL LAWS RELATING TO NATIVE USE OF BOWHEADS ARE FULLY UNDERSTOOD AND COMPLIED WITH.

I BELIEVE THAT THE PEOPLE OF THE UNITED STATES, ESPECIALLY THE ESKIMO WHALERS, CAN AND WILL DEMONSTRATE TO THE REST OF THE WORLD THEIR DEEP SEATED CONCERN FOR THE PERPETUATION OF WHALES THROUGH ADOPTION OF CONSERVATIVE REGULATIONS FOR WHALING. THROUGH THEIR IMPLEMENTATION, THE UNITED STATES WOULD NOT ONLY PRESERVE ITS CREDIBILITY AS A LEADER IN THE CAUSE OF CONSERVATION, BUT ALSO DEMONSTRATE THE DEPTH OF OUR NATION'S COMMITMENT TO THE PROTECTION AND PERPETUATION OF UNIQUE MINORITY CULTURES.

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TO THOSE OF YOU WHO MAY FORMULATE OUR NATIONAL RESPONSE TO THE I.W.C. RESOLUTION, I STRONGLY URGE THAT THE UNITED STATES OF AMERICA, ON BEHALF OF THE ESKIMO WHALERS, LODGE AN OBJECTION.

IF TO THOSE OF YOU WHOSE CULTURE AND WELL BEING REVOLVE

-9-

AROUND THE MAGNIFICENT BOWHEAD WHALE, IT WOULD APPEAR THAT A REASONABLE AND FAIR PRICE TO BE PAID FOR SUCH ACTION MIGHT BE AN EARNEST COMMITMENT TO A TEMPORARY REDUCTION OF THE WHALE HARVEST AND ELIMINATION OF UNNECESSARY LOSSES AND WASTE; CERTAINLY, ONE OF THE GREAT LEGACIES THAT CAN BE LEFT FOR FUTURE GENERATIONS OF INUIT AND OTHER PEOPLES OF THE WORLD IS A HEALTHY AND ABUNDANT POPULATION OF BOWHEAD WHALES CAPABLE OF FURNISHING THE CULTURAL, SPIRITUAL AND MATERIAL NEEDS OF THEIR CHILDREN'S CHILDREN.

-10-

Response to comments received from Governor Jay Hammond.

47. The FEIS discusses the relationship of the proposed alternatives to the IWC resolution and domestic legislation.

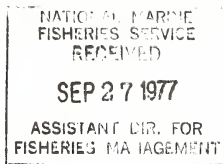
9/26

F3 Please answer directly

Rmd

ST. FRANCIS XAVIER MISSION
KOTZEBUE, ALASKA 99752

September 22, 1977

Robert Schoning
Director of National Marine Fisheries
Washington, D.C. 20235

Dear Sir:

I am writing to you of my concern regarding the Bowhead Whaling Ban. I am a volunteer in the Jesuit Volunteer Corp, and I'm positioned in Kotzebue for the year. I have been present at some of the local hearings regarding the ban, and although the testimony of the native people has really been great, I realize that the testimonies will have little to no effect.

Being a recent college graduate with a specialty in marine biology, I know something about ~~the~~ environmental impact studies, although admittedly, I am no expert. It is my understanding that ^{the} EIS that is the basis for the whale ban, does not contain a count of the number of bowheads up in this region. Since the data is unclear, can you suggest this ban in right conscience?

It appears to me you have lots to gain and little to lose by placing an objection with the ban. The support of the natives up here, could be valuable. This culture is being wiped out - literally. I've heard it said, but to watch it actually occur turns my stomach. How can you rationalize seasons and time-limits on a culture's existence?

ST. FRANCIS XAVIER MISSION
KOTZEBUE, ALASKA 99752

That's rough enough, yet how can you justify a ban on an ~~amr~~ animal when you're not sure of an upcoming regeneration or of it's dropping off?

I come from California, and was sympathetic to the Save The whale campaign. (past 15 yrs) All the right emphasis is placed in all the right places. Sure I'm against the endless slaughter of any animal, yet if that animal keeps a man and his family alive, keeps them warm and instills pride in a floundering community - then indeed the scales are not balanced.

Would it be so wrong for the government to back up its people? Mr. Schoning, I'm desperately afraid that an objection won't be stated because of political pressures. The United States does not consist of 48 States!

Thank you.

Colleen McLaughlin IV
St. Francis Xavier Mission
Kotzebue, Alaska 99752

Response to comments from Colleen McGauley.

48. Population estimates are included in the FEIS.

September 21, 1977

Mr. Robert Schoning
Director
National Marine Fisheries Service
Washington, DC 20235

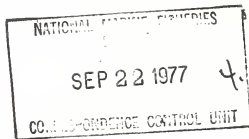
Dear Mr. Schoning:

On behalf of The Humane Society of the United States (HSUS), I am pleased to submit the following comments on the Draft Environmental Impact Statement (DEIS) entitled: International Whaling Commission's Deletion of Native Exemption for the Subsistence Harvest of Bowhead Whales. These comments are based upon our review of the DEIS, the Transcript of Proceedings (TP) in Washington, D. C. September 8, 1977, the report of the IWC Scientific Committee, and my experience with whale conservation efforts as an observer to the International Whaling Commission in four of the last five meetings including the most recent one held in Canberra.

HSUS is a national, non-profit organization dedicated to the relief of fear, pain, and suffering of all animals. We are with respect to staff, program, members, and constituents, probably the largest animal welfare organization in the United States.

HSUS SUPPORTS THE ALTERNATIVE OF NO OBJECTION

Based on our overall assessment of this very difficult problem, the HSUS strongly supports the position that the United States should not file an objection to the IWC's decision to delete the native exemption for Bowhead whales. It is our opinion that filing an objection would have devastating effects upon whale stocks throughout the world. These effects would be so deleterious to the whale conservation program as to probably render it hopelessly beyond repair. It would spell doom for thousands of whales far beyond the many thousands mentioned in the DEIS (p.64). That table (p.64) reflects recommended quotas and not "desired" quotas on the part of whaling nations who would also object if the United States did. It also does not reflect whaling activities outside the IWC membership which would be encouraged and no doubt expanded if the United States filed an objection. Further, the DEIS does not consider the effects of such an action on the negotiations now underway to re-write a more conservation



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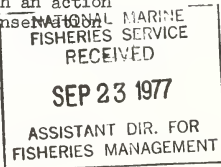
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minded international cetacean convention. It does not consider the possible effects on negotiation at Law of the Sea regarding protection for marine mammals and other living resources. All of these would be far more injured in the long run by an objection this year than would be the affected natives who know and expect "lean" years in whale catches. A single year without Bowheads would hardly spell doom to the entire Eskimo population or culture. It could spell just that for the world's few whales.

DEFICIENCIES IN THE DEIS:

As already mentioned, the DEIS is inadequate in its consideration of the effects of filing an objection on all international conservation efforts. How can the U. S. remain a viable international voice for any conservation efforts when we conserve only to suit our needs and force other nations to conserve whether it suits them or not? A case in point is the history of the IWC since 1972. In effect, the U. S. has forced whaling nations to reduce overall catch by 60 percent, thereby causing extreme unemployment among their people. Their whaling industries have lost over half a billion dollars in gross values of whales caught and thousands of jobs (TP, p.162). It is my understanding that the Japanese who lost their jobs as whalers had no other training. In fact, to be a whaler is a part of their tradition and culture. They expect to be employed as whalers throughout their working life, since it is the Japanese way to have a lifetime job with one employer. Although it was cultural and traditional to be a whaler, the U. S. was steadfast and the protection of the endangered resource prevailed.

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The DEIS does not deal with just how the U. S. helped force compliance with low quotas. One way was, of course, to call upon world opinion. There is growing concern on a global scale demanding a ten-year moratorium on all commercial whaling. But probably more importantly, the U. S. threatened an embargo of fish products from whaling nations filing an objection. This was accomplished via the Pelly Amendment to the Fishermen's Protective Act. In 1973, both Japan and the USSR filed objections to IWC quotas. As a result of their actions, the Department of Commerce rightly certified (in accordance with the Pelly Amendment) that both countries were "diminishing the effectiveness of a conservation program of an international fishery convention to which the U. S. is a party." This certification gave a green light to President Ford to embargo all fish products imported from these offending nations. President Ford stated that he chose not to invoke this strong action because "The Soviets and Japanese voted for the 1974-75 quotas and, in general, appeared to be more conciliatory than during previous meetings." Obviously, the threat of an embargo had a tremendous impact on all IWC members and no objections have been filed since that time.

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It is unthinkable that the U. S. government would even consider taking an objection in light of its own stand against others for doing so in the past. Or for that matter at this very moment. Consideration is presently being given (and is widely supported) to invoke the Pelly amendment against non-IWC whaling nations because they are not adhering to the strict quota system as recommended by the IWC scientific committee. President Carter's Environmental Message called for information to

be provided to him concerning any nations which "diminish the effectiveness of the conservation regime of the IWC." Surely we are not intending to certify ourselves as an offending nation?

HSUS submits that when the U. S. decides upon a course of action affecting international treaties such as objecting to an IWC quota, past U. S. legal positions and long-developed traditions cannot be ignored or, in this case, changed.

Another international legal principle must be considered in this problem and that is the U. S. 200-mile zone policy. Presently there is a policy that no commercial whaling can occur within our 200-mile fisheries conservation zone. This policy is based on the position that a state can take a more restrictive view regarding these resources but not less restrictive than the international regime. Thus, the U. S. has stated that while we support the IWC we can take even stronger conservation measures for whales within our own 200 miles than those to which we agree at IWC. In the case at hand, the U. S. would be subverting this policy by allowing native take of Bowheads and in effect be allowing a less restrictive conservation policy than was called for by IWC. Undermining this particular U. S. policy would no doubt have adverse effects on other living resources besides whales.

The most unfair and appalling omission in the DEIS is the lack of discussion regarding the fate of the Eskimos and their culture if there are no Bowheads left to hunt. It has happened elsewhere. What if the U. S. files an objection, some regulations are implemented domestically, and there is little compliance (a constant threat by the Eskimos, TP,p.25) and more money is available to continue killing at the present or even greater rates because the Eskimo population continues to increase, what happens to the Eskimo culture then? It is a gross mistake to rely upon sketchy, self-serving native data and say there are more whales than ever so we can kill many more. During tuna/porpoise testimony, indications were that sightings alone tended to overestimate the size of dolphin herds. A scientific model was necessary to develop safeguards and statistical probabilities to really know what was a safe quota. It would be to the advantage of the Eskimo and future generations to listen to the scientists and heed their warnings. The whale industry is replete with stories about warnings that populations were at dangerously low levels being disregarded. In relatively short order, however, the whaling business collapsed because there simply were no more whales. Cetaceans are known to have population crashes as they reach critically low levels. The Bowheads have already crashed and are tetering on the brink of total extinction. Yet the Eskimos are willing to risk everything. . .the Bowheads, their food, and their children's heritage because they refuse to comply with a one-year ban on taking Bowheads. Simple calculations show that a population of 1,000 Bowheads, even if they are all adults and they are all reproducing at record levels, could not last long under pressure like the spring 1977 hunt.

Efforts must be put into saving Bowheads and devising better methods of recovering the whales. The whole issue of quotas is moot if there are no whales.

Based on all these reasons, we believe it is better for all concerned if the U. S. does not file an objection.

Another omission that greatly concerns us is the lack of any reference to the possibility that natives no longer have a special exemption under domestic law as a result of the Native Claims Settlement Act. More specifically, under that Act all aboriginal hunting or fishing rights are extinguished. See 43 U.S.C. §1603(b) (Supp. V, 1975). This whole area needs clarification before anything as precipitous as objecting to an international treaty is concerned. The issue of whether or not to object because of native claim to special rights may be moot.

The DEIS does not fully develop the possibility of food alternatives. For example, the Bowhead is virtually extinct in Greenland yet no mention is made as to how those natives are able to survive without them. There is no discussion of the nutritional value or the viability of substituting gray or beluga whales for the 1978 season. The natives in the USSR eat gray whales. Canadian natives successfully and with little loss take belugas for food. Why not use these as temporary substitutes? This is an especially important question when as we see in catch data, there are years when no Bowheads are taken. How can we not enforce a zero quota for one year when past history shows that the Eskimos have gotten along without them before?

The DEIS presents no evidence to dispute the findings of the IWC that the Bowhead population is about 1,000 whales. There are only undocumented claims otherwise. Therefore, a zero quota is justified. It is further justified because the IWC has strongly urged the U. S. government to control the Bowhead hunt for the last five years, and passed strong resolutions to that effect. A zero take is not a decision taken lightly or whimsically by the IWC. It is based on data and knowledge of whale biology. The natives were told of their precarious position in the IWC this year and were specifically asked to be on the U. S. delegation in 1977 to present their point of view. No one went. Apparently, not one native thought it important enough to make the trip. The National Marine Fisheries Service also notified the natives that their hunt was going to be monitored in the spring of 1977 and that they should make every effort to reduce struck and lost. The results were appalling in that more whales than ever were struck and lost. This certainly did not indicate to IWC that there is a sense of seriousness about stopping the waste and conserving whales on the part of natives. Given this background and no data to refute the low Bowhead population data, the scientific committee had little choice in its recommendation.

There is still another reason why the question of taking an objection thereby jeopardizing all whale conservation cannot be done. It is the Marine Mammal Protection Act (MMPA). Under that law, the natives do not qualify for a special exemption if a species is depleted and they can be shown to be contributing to the depletion and be taking in a "wasteful manner." See 16 U.S.C. §1371(b) (Supp. V, 1975). It is our opinion that the Bowhead is the most severely endangered of all whales and must be considered depleted. There is no reason to believe that the U. S. government will not make that same finding since they are reviewing the status of depletion for Bowheads. Secondly, the natives are unquestionably taking whales in a wasteful manner, witness the spring hunt when only 27 whales were landed and another 77 were struck and lost. That can be nothing but

wasteful. Thus, based on excellent evidence that the natives would be regulated and perhaps be restricted to zero or close to it even under domestic law, it would seem impossible to file an objection.

We disagree with the conclusion (DEIS,p.61) that if the U. S. does not object the research will be significantly restricted. It is certainly possible to conduct research programs and develop adequate data on populations without the actual hunt continuing. Aerial surveys, tagging, etc. are excellent means for doing valid research. But, in any event, if the scientific research absolutely requires some take in order to reach decisions on age, sex, etc., so that the best estimates and quotas can be set, then a scientific permit is available under IWC for this purpose.

SUGGESTED ACTIONS BASED ON NOT FILING AN OBJECTION

Scientific research is absolutely necessary for resolving this problem. We support any efforts along this line including use of and payment to natives to conduct research efforts.

Enforcement of the zero quota will be extremely difficult. We agree that true enforcement must come from those who want to use the resource and therefore the job of actually enforcing could serve as another source of income for many natives who would normally be taking the whales. In any event, it is possible to report infractions to the IWC if any occur.

Another matter which is of extreme concern to the HSUS is that of humaneness of kill. We believe that the struck and lost problem spells great suffering and a lingering and cruel death for many whales. This aspect should be considered along with the wasteful manner of taking in establishing regulations on native take. While we agree that a zero take is necessary for 1978. An excellent regulatory scheme for true subsistence needs would no doubt be given consideration within the IWC. HSUS hopes that every effort will be made to consider the humane aspect of wasteful taking within this scheme. The required use of a dart gun with a float would be a good start.

The whole question of food sources for subsistence must be re-evaluated in light of testimony given by native leaders that all such resources are diminishing (TP,p.9). If there is continued land, oil, and other types of development which is supported by and encouraged by the natives then a reduction in available food will follow. They cannot have it both ways indefinitely. This is especially true as evidence mounts regarding wastefulness of native take and use of food animals. The need for whale blubber, for example, is no longer as important because sled dogs are rarely used now, and the dogs were the primary consumers of the blubber. . . it now lies unused. (Photos of be-headed walrus carcasses lying rotting, and disregard for migratory bird treaties.) It is possible that all native take will have to be severely curtailed and regulated in the future.

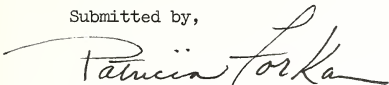
Proposals must be developed immediately regarding (1) how the U. S. will enforce the zero quota, (2) a viable regulatory scheme which includes native input and cooperation, and (3) scientific research plans to determine population data to be

Mr. Robert Schoning
Page 6
September 21, 1977

presented to the Scientific Committee and the IWC next year for their consideration. We would certainly support a truly subsistence take based upon improved taking techniques and strictly regulated quotas which included whales struck and lost as part of the quota. It must be approved, however, by the IWC.

HSUS appreciates the opportunity to comment on the DEIS and certainly hopes that cooperative efforts among all concerned parties will be possible.

Submitted by,

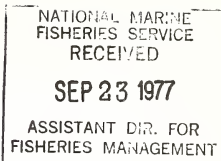
A handwritten signature in cursive script, reading "Patricia Forkan". The signature is written in dark ink and is positioned to the right of the text "Submitted by,".

Patricia Forkan
Program Coordinator
The Humane Society of the United States

Response to comments from Patricia Forkan, The Humane Society of the United States.

49. These comments are addressed in the FEIS section on the IWC history.

50. These comments are addressed in the FEIS section on history of whaling legislation.



Endangered Species Productions

19 September 1977



Mr. Robert Schoning
Director
National Marine Fisheries Service
Washington, DC 20235

Dear Mr. Schoning:

We are pleased to have the opportunity to comment on the Draft Environmental Impact Statement (DEIS) relating to the Eskimo hunt for the bowhead whale (Balaena mysticetus).

We urge the United States to accept the findings of the Scientific Committee of the International Whaling Commission (IWC) that the Eskimo hunt for the bowhead be suspended. We urge that no objection be filed. Our reasons for this recommendation follow.

1. A sacred, honored law of the sea is that the least navigable craft has the right of way. Surely, the bowhead whale is the "least navigable craft." It has one strait to passage. It cannot change; Eskimos have, and will. Any sensitive person wishes Eskimos to cherish and recreate, where possible and desirable, their cultural heritage. We challenge, however, the notion that hunting the bowhead is indispensible. Eskimo whaling, by its own admission and example in 1976, is a modern hunt, pursued by those affluent enough to outfit a boat.

2. Increased hunting of an endangered species has occurred. We disagree with the statement at 93C, p. 2, of the DEIS characterizing as "abrupt" any cessation of Eskimo whaling for the Spring 1977 season. Over the past several years, as documented in reports from the IWC in 1973, 1974, 1975, and 1976 (also cited in the DEIS), Eskimo hunting has been under increasing criticism and scrutiny, and even last year Eskimos were informed of the need for caution and were told an increased kill would put their hunt in jeopardy. We do not accept the statement that the IWC resolution is abrupt.

3. We believe an objection to the IWC resolution would render void the United States effort for conservation of marine mammals, especially whales, and that such an action would disrupt and possibly destroy the IWC itself.

The US has been visible and verbal in the pursuit of a 10-year moratorium on the killing of whales, has supported and encouraged low quotas on species hunted by other nations in the knowledge that such low quotas caused financial difficulties for commercial whalers. To turn around now and object to protection of whales, especially an endangered species, would be an admission that the US is only concerned for whale conservation when it involves other nations, other pocketbooks.

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(Continued...)

Above all, the US has steadfastly recommended strict adherence to scientific advice and evidence. Registering an objection in the face of the IWC Scientific Committee's recommendation would seriously damage our credibility and violate our conscience. It would turn President Carter's fine message to the IWC into empty rhetoric. Who would believe him in conservation issues hereafter?

There is no question in our minds that if the US lodges an objection, whale conservation will be totally undermined.

4. Lodging an objection would be contrary to the spirit and the letter of the Marine Mammal Protection Act of 1972 (MMPA). The appalling loss-to-landed ratio of Eskimo whaling has been documented for some time. There is clear evidence that whaling as practiced by Alaskan Eskimos is wasteful, and is therefore in direct violation of the MMPA.

While data are lacking about the number of struck-but-lost whales which actually die of wounds, we find it significant that almost no whales are taken which show scars of old bombs. This fact was stated by Arnold Brower, Eskimo whaling captain, at the hearings on designating the bowhead as a depleted species held in Washington, DC, on 8 June 1977.

5. The Mammals in the Seas Consultation in Bergen, Norway, in 1976 was convened by the Fisheries Division of the United Nations Food & Agriculture Organization to investigate the status of marine mammals and to provide information for use by governments in formulating policy on marine mammals. While the final report of this meeting is not yet available, one report generated in Bergen is relevant to the bowhead hunt. Working Group 21 on Product Substitutes considered the use of marine mammals by native peoples. This group noted (ACMRR, 1976):

I. Exploitation by traditional communities for their own benefit in accordance with traditional usages is consistent with rational resource management.

II. However, if traditional exploitation becomes extended, diverted, or replaced, evaluation of the exploitation should be made, based on:

- a. reason for the demand in relation to human need ("need" is defined as the essential minimum needed for survival)
- b. capacity of the resource to be utilized on a sustained basis
- c. effectiveness of control of exploitation levels
- d. alternatives and ecological consequences of them
- e. the extent to which demand is influenced by affluence, culture, taste, etc.

III. If the evaluation reveals the demand is excessive in relation to the biological capacity of the resource, or creates excessive demands on other resources, it is not consistent with rational use.

IV. If the evaluation reveals wastage, it is not consistent with rational use.

Since Eskimo bowhead whaling has been expanded and since affluence appears to be the factor in this expansion, and since wastage is obvious, under the guidelines suggested by this international Consultation, taking of bowheads would no longer be considered a rational use of whales.

(continued ...)

6. Cessation of whaling in accord with the IWC resolution means Eskimos will skip the Spring hunt. We fail to see how this would cause extraordinary hardship. Prior to increased mechanization and effort in 1970, villages were often unable to whale because of ice conditions.

7. We question the repeated statement that bowheads are taken in "traditional" ways and the statement at 92, p. 37 that whaling is an example of "old ways" to be passed on. True, the bombs, manufactured by Naval Guns Company of Doylestown, Pennsylvania, and the basic weaponry have come down from Yankee whaling days and have been standard since 1894, less than a century. Two-way radios, outboard motors, aluminum skiffs, plastic floats, bulldozers and snowmobiles, however, hardly constitute "old ways." Traditional methods (e.g., sails on umiaks, harpoons) have been abandoned entirely and the old methods appear to have been less wasteful (Durham, 1974).

In Children of the Light (Allen, 1973), seven pages are devoted to the rituals and magic associated with traditional Eskimo pursuit of the bowhead -- careful preparations, taboos, activities of deep religious significance. These have been lost. This traditional magic and ceremony is in sharp contrast to today's methods, exemplified by an illustration in the September 1977 Alaska magazine which shows an Eskimo man standing alone on the ice, shooting at a surfacing bowhead with a rifle (shoulder gun?), with no crew, boat, buoys or other gear in evidence.

Durham (1974) writes that Eskimos have failed to pass on the "know-how of the old Eskimo hunt culture and the finesse of the Yankee whaler." He indicates this failure is partly responsible for the high number of whales struck and lost. We question therefore, the whole concept of the need for Eskimos to "preserve their culture" by killing an endangered species with enormous waste. We suggest that Eskimo culture has been, regrettably, corrupted by both non-natives and Eskimos themselves.

Use of umiaks, while certainly a traditional gear item, appears to be also simple good seamanship for Arctic waters. Durham (1974) writes that land-based Yankee whalers used umiaks "which were superior to wooden whaleboats." Bandi (1969) notes that the most important traditional Eskimo hunting weapon is the harpoon -- a weapon which has been discarded by modern hunters in favor of the wasteful bomb.

8. We challenge the repeated statement that bowhead whaling is a "subsistence" activity. It is expensive, so costly in fact, were cash not available to Eskimo men as a result of their entrance into the non-native cash economy, the large number of whaling crews seen in 1976 would not be possible. Marquette (1977) lists the prices for whaling gear, and it is obvious, with shoulder guns selling for \$647 each, capital is needed to outfit a boat. We question whether such impressive capital outlay may be called a part of "subsistence" hunting.

Marquette (1977), Fiscus & Marquette (1975) and Nakashima (1977) all note that whales are frequently dead up to 30 hours before butchering is complete. While Eskimos used to eat fermented meat, modern Eskimos appear to abandon spoiled flesh. Also abandoned is the blubber, which in *Balaena mysticetus* is a substantial part of the whale. Baleen appears to be used only to make curios for the tourist trade.

(continued ...)

Endangered Species Productions

19 September 1977

Comments on the DEIS on Bowhead Whaling - 4 4 4 4

9. We question the statement at 42, p. 52 that the Eskimo view of "existence as coextensive with the land and animal life of the arctic environment is sufficiently different from the non-native perspective" to create problems in mutual understanding. On the bowhead whale issue, natives and non-natives, it would seem, should share a common ground: extinction of the bowhead whale, or further reduction of its numbers, should be deplored by both sides. Non-natives, in demanding a cessation of bowhead whaling for the Spring season, make the demand because native peoples have failed to coexist in a rational manner. Inexperienced crews, modern communications, decreased utilization of whales killed and terrific waste are not consistent with respect for the environment.
10. We recognize that the growing Alaska Eskimo population is suffering cultural shock. We feel they have every right to resist the encroachment of a cash economy and a Stateside culture; but these problems will not be solved by allowing a continued hunt on the bowhead. Both Alaskan Eskimos and the bowhead whale, whether they like it or not, are part of the international community.

The health of the bowhead is in grave jeopardy; the strength of whale conservation throughout the world is in serious jeopardy. Eskimo culture, which has historically shown itself to be adaptive and resilient, will not suffer irreparable damage if the Spring hunt is prohibited.

We urge that no objection be filed.

Sincerely,



Phoebe Wray
Executive Director
Endangered Species Productions

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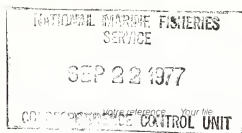


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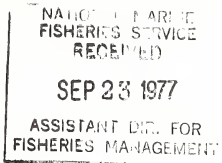
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Notre référence : Our file :

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15 Sept 77

Mr. Robert Schoning, Director
National Marine Fisheries Service
Washington, D.C. 20235
U.S.A.

Dear Dr. Schoning:

I have read the Draft Environmental Impact Statement on the bowhead whale harvest prepared by NFMS and have several comments to offer. These must be considered personal and not necessarily in accord with those of the Canadian Government.

I do not agree with the idea of a moratorium on the Alaskan native hunt, but would support a lowered catch at some appropriate level until better data have been accumulated.

While an increased catch of beluga could be considered a substitute for the bowhead hunt, the suggested quota of 360 may be dangerously high. If we assume a loss rate of 50 percent, the kill would be 720 which must be added to about 200 (including losses) killed by the Inuit and Indians of the Mackenzie delta. This potential kill of 920 represents 18.4 percent of the estimated population of 5000 beluga migrating into the Mackenzie area each summer. This is much too high, considering that the birth rate is about 11 percent. Even if there were 10,000 beluga in the area, 9.2 percent would still be on the high side.

I hope this information will help you in your review of the impact statement.

Yours very truly,

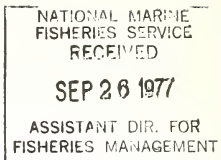
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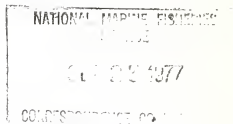
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KODIAK, ALASKA 99615

September 16, 1977



Mr. Robert Schoning, Director
National Marine Fisheries Service
Washington, D.C. 20235

Dear Mr. Schoning:

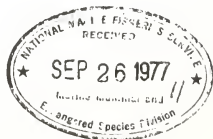
Koniag, Inc. has completed the reading of the "Draft Environmental Statement on the International Whaling Commission's deletion of native exemption for the subsistence harvest of Bowhead whales," and wish to make the following comments:

1. It is our opinion that the Eskimo has, over many centuries, come to depend on the Bowhead whale for his own subsistence.
2. He has also had the right to rely on the Bowhead to provide him with meager economic benefits if they were used to enhance his own culture.

With just those two factors we feel that the Commission should allow the continuance of Eskimo taking Bowhead whales for subsistence for the following reasons:

1. The Eskimo has needed the Bowhead whale for use as his food in order to survive. Without the Bowhead, he would suffer healthwise, for much of his body chemicals are derived from the mammal.
2. Much of his other material needs are taken from the Bowhead. These are used for simple survival needs and to make his life more comfortable under the conditions in which he lives.
3. With what remains of the Bowhead he is allowed to continue to aid himself economically through sale of artful objects, which, if the Bowhead is deleted from their subsistence taking, will die out possibly forever.

180



These are extremely basic points, but Koniag, Inc., is of the understanding that the issue itself is basic. Through a bureaucratic process, a Commission of countries and our own mother country are trying to snuff out an existence of people that have, for centuries relied on a product of the sea, even now under conditions that some Commission and country are responsible for creating.

The recommendation that Koniag, Inc., wishes to make to the Commission are:

1. Do not by the stroke of a pen write out of existence the foodstuff and cultural heritage, and all that goes along with that phrase, of a brave and courageous people. (Brave to exist under the extreme conditions they do, and courageous to continue to do so.)
2. Through the Commission, implore or order the U.S. to start a high priority study of the Bowhead, in order to save the species from non-existence.
3. Continuance to allow the taking of Bowheads for subsistence reasons. The Eskimos are themselves trying to rectify situations that have caused the reasons for the Commissions wish to delete subsistence taking of Bowheads through their own studies, teaching better harpooning methods and tactics, and to better adjust their kills to their subsistence needs.

Koniag's main argument is that the present situation wasn't caused by the Eskimo's, and to blame them by cutting off a lifestyle, isn't the answer. The answer lies with the Commission, who as a responsible party should work toward continued conservation of the species by other countries, urge further studies of the Bowhead, to gain more knowledge and understanding of how to assist in the survival of these Bowhead whale, and to aid the Eskimo people in continuing in their way of life, liberty and happiness.

Sincerely,

KONIAG, INC.



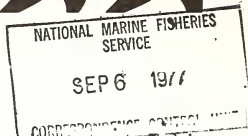
Gene Sundberg
Vice President Lands

GS/va

cc: All Regional Corporations
All Village Corporations
Congressional Delegation

2 September 1977

Mr. Robert Schoning; Director
National Marine Fisheries Service
Washington, D. C. 20235.



Dear Mr. Schoning:

I appreciate the opportunity of reviewing the important Environmental Impact Statement relative to the deletion of native exemption for the harvest of bowhead whales. I consider it a fair statement. Because some of the true topics seem not to tell the "whole truth" 9 add:

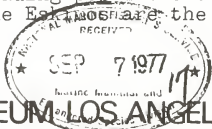
On page 41 I read: Perhaps the most difficult problem (is) an acceptable alternate food.... It should be no problem at Barrow, at least. Numerous Eskimos employed at NARL and the Camp eat hearty "American mid-day meals at the mess hall. They frequently make up for no breakfast at home by eating doughnuts, pie, cake, and cookies at the morning coffee break. Tea, coffee, hot chocolate, also available at afternoon break. In 1961 I lived in a whaling camp during the spring whaling. NARL was afraid that we 4 white boys would starve so it supplied us (and the Eskimos) with voluminous quantities of steaks, chops, juices, canned fruit, bread, Sailor Boy biscuits, --all of which were preferred even by the Eskimos to native foods. Eskimos employees of NARL mess hall take home "leavings" to feed their families. One white employee with an Eskimo wife and children also supplied the family with much of their food from the mess hall.

In the 1960s when high school and college students attended school "outside" readily adapted to "white food", lost their high radio-active fallout accumulations derived from a rich caribou diet, and, on returning home were reluctant to return to the native diet. Their craving for candy and pop is not exceeded by L.A. children. These luxuries are a long way from muktuk, the Eskimo "icecream."

Relative to the omission of whale food as a detriment to native culture. Every adult Eskimo should remember the "lean" years when no whales were taken. Until recently, every fifth year (i.e. 20%) was a whaling failure. Barrow lived through 3 consecutive years of no whale and Wainwright had 5 years in a row. The whaletake is steadier at Pt. Hope, but they can't supply meat for the whole NW coast. Wales went for decades without a fresh whale (See Durham, in press Catch of Bowhead Whales by Alaskan Eskimos). Only recently (1969) have the lean years ceased at Barrow. Now all seasons are feast years with 10 or more whales.

My second, and perhaps my most important point, concerns Beddington's paper in the appendix. It is probably an astounding work of science and mathematics but it is understandable to me. Even so, I think it impresses favorable our elite society members but I fear an adverse effect on the Eskimo reading population. It might confuse or antagonize them. Actually, the Eskimos are the audience we wish to convince.

Giles W. Mead, Director
C. F. Gehring, Assistant Director
Leon G. Arnold, Assistant Director



NATURAL HISTORY MUSEUM OF LOS ANGELES COUNTY

Los Angeles County Museum of Natural History • 900 Exposition Boulevard • Los Angeles, California 90007 • Phone (213) 746-0410

I referred the paper to my good friend, Dr. Pyle. He gladly gave me his interpretation, which I am enclosing, as well as my own ABC version. I respect Dr. Pyle's opinion because of his lifetime of experience in mathematics. He is also a dedicated worker in the American Friends Service Committee and knows how to deal with All peoples. He is further qualified to give me and NMFS help because his grandfather was Joseph M. Chase, Captain of the whalers, Catherine and Penelope. Next of kin was Joseph's brother, Owen Chase, First Mate on the ill fated whale-ship Essex. Owen kept the ship's log and record of the drifting of the crew in the whale boats after the sperm whale demolished the big snip.

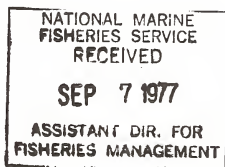
I hurriedly send you this report because it may be helpful at the 8 Sept. hearing in Washington, D.C. Certainly it should not be neglected at the Alaskan hearings.

My regards to D. Andrews and best wished to NMFS

Sincerely,

Floyd E. Durham

Floyd E. Durham.



A non-mathematical summary of the paper: ON THE RISKS ASSOCIATED WITH DIFFERENT HARVESTING STRATEGIES, by J. R; Beddington.

In a mathematical model one adopts a set of assumptions and uses mathematical reasoning to determine the consequences of those assumptions. The conclusions are only as valid as the underlying assumptions. The author considers two different systems of management, the quota system and effort management. He sets up a mathematical model for each, pointing out that we can never be sure that the assumptions are correct or that the data we have are sufficient for accuracy.

Quota system.

He states his assumptions in the form of a series of equations. He concludes that at or near MSY any variations in numbers due to environmental factors will take a long time to disappear. If the quota is set near MSY there is danger that outside influences will reduce the number to a point below that desired. It is better to take a fractional part of MSY for the quota.

The Sei Whale Model.

He gives a complex formula for fixing quotas for Sei whales. From this he concludes that if the harvest is set at more than .8 MSY, variations due to environmental conditions will greatly affect the total numbers, perhaps in an undesirable way. If the harvest is set at MSY, it is probably that the stock will fall below its MSY level in 10 years. If the harvest is .9 MSY the time is 20 years, and if the harvest is .8 MSY the time is 100 years. It seems desirable to set the harvest below MSY.

Effort Harvesting.

He repeats the process for effort harvesting, and concludes that over all ranges of harvesting the effort method is better than the quota method. This is particularly true if the quota is near MSY.

Summary by Dr. H. Randolph Pyle, Emeritus Professor of Mathematics, Whittier, College, Whittier, Calif.

Solicited and forwarded to Dr. ^{Robt. Schommy, Director NMFS} ~~Stanley R. Geller, U.S.~~
~~Dept. of Commerce~~ by Floyd E. Durham, Mus. Nat. Hist.
of L.A. Co. Calif.

With the aid of Dr. Pyle's interpretation of Beddington's paper before me, I present my version in Durham-Eskimo conversational style for your consideration, corrections and additions.

There are two ways of managing a stock of animals, by quota and by effort. How do these work with stocks of big whales?

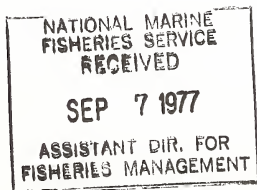
The quota system allows a certain number to be harvested every year. If fewer animals are killed than are born, the stock increases; if more are killed than are born the stock decreases; if the number killed and number born are equal, the stock is still likely to decrease, particularly with the many adverse changes in today's environment. For example, a stock of sei whales is producing 100 new whales each year. "on paper" the stock is increasing. If a kill quota of 100 whales per year is set, the stock should just "hold its own." However, bad environment will probably cause a noticeable decrease in number of whales in 10 years. If fewer whales (90 per year) are taken it will take 20 years; or if yet fewer (80 per year) it will take 100 years before the stock declines. It is desirable to set the harvest at a lower figure than the rate of reproduction to insure long life to the stock of sei whales.

(By projection of these figures, I calculate that if the quota were 70 whales, the decline would be delayed 500 years, and so on ad infinitum,--but eventually the stock is doomed for extinction by the quota system if more than zero whales are taken annually.)

The effort system is better.....

(but is not defined, described, or illustrated. Dr. Pyle did not understand it and therefore could not comment). Without reading (and studying!) the 10 cited references I do not know if "effort" refers to man-hours, number of datcher boats, style of harpoon or? It follows that in my accepting the superior but "unknown" system of management, I am "buying a pig in a poke." For my benefit, and also for Nusunginya's, Nakapigeak's, and Kinneveauk's, have someone rewrite this last paragraph,--or better yet, the whole summary.

Floyd E. Durham.

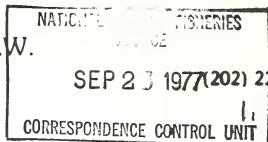




MONITOR

THE CONSERVATION, ENVIRONMENTAL
AND ANIMAL WELFARE CONSORTIUM

Suite 506
1785 Massachusetts Ave., N.W.
Washington, D.C. 20036



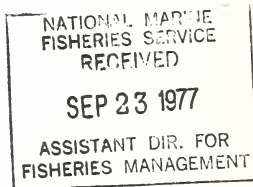
Mr. Robert W. Schoning, Director
National Marine Fisheries Service
NOAA, Department of Commerce
Washington, D. C. 20235

September 22, 1977

Dear Mr. Schoning:

The Monitor member organizations listed below endorse the contents of this letter:

Defenders of Wildlife
Humane Society of the United States
The Fund for Animals
Connecticut Cetacean Society
Animal Welfare Institute
Audubon Naturalist Society of the Central Atlantic States
Committee for the Preservation of the Tule Elk
Let Live
International Primate Protection League
Washington Humane Society
American Littoral Society
Chesapeake Chapter, American Littoral Society
Society for Animal Protective Legislation
Rare Animal Relief Effort



After examining the draft environmental impact statement on the International Whaling Commission's deletion of native exemption for the subsistence harvest of bowhead whales, we strenuously oppose the filing of an objection to the IWC decision.

An objection would destroy U. S. credibility in the IWC and other international fora. An objection would likely precipitate objections to other whale quotas from Japan, the Soviet Union, and other whaling nations. The hard-won whale conservation measures adopted over the last five years could be wiped out by such ill-considered action.

President Carter would be made to look like a hypocrite if an objection to the bowhead quota is filed.

President Carter has been a leader in the whale conservation campaign since 1971. During the 1976 Presidential campaign, he issued a position paper stating:

"I have a longstanding commitment to protect the oceans and the animals that live therein. The United Nations Conference on the Human Environment

took place in Stockholm, Sweden, in 1972. I was a member of the advisory commission to the United States delegation. At that time, I worked to make preservation of whales a major issue at the conference. Since then, I have been concerned about the destruction of many stocks of marine mammals and fish.

"I have supported the Marine Mammal Protection Act of 1972 since its passage. So far, implementation has been slow and timid. Under the Carter Administration that will not be the case. We just join together with other nations to preserve the species in the oceans that are endangered or threatened."

On May 23, 1977, President Carter issued his environmental message. "In order to provide additional protection for whales," the message stated, "the Secretary of Commerce, with the foreign policy guidance of the Secretary of State, have been directed to pursue negotiations within the International Whaling Commission for a stronger international conservation regime for whales and other cetaceans, affording protection for them throughout their range."

In a personal message to the opening session of the annual meeting of the IWC, at Canberra, Australia, on June 20, 1977, President Carter stated: "Whales have become symbolic of our environmental problems as a whole. No longer are they viewed as a product from the sea available to those with the technology for their harvest."

The President called for a ten-year moratorium on commercial whaling and issued a clear warning to nations "which diminish the effectiveness of the conservation regime of the IWC."

The IWC acted to set a zero quota and remove the native exemption after it was apparent that the U. S. government has failed to regulate the Eskimo killing. As far back as 1972, the IWC expressed concern over the increasing hunting of the bowhead. Of all the ten species of great whales, the bowhead is the most endangered. Its population is estimated to be just 6% to 10% of original size. Other whale stocks are given full protection by the IWC when they reach 54% of original population.

In 1976, the IWC adopted a strong resolution calling for the U. S. to institute regulations to reduce the bowhead kill. When the IWC scientific committee this year learned that the spring hunt in Alaska had been the largest in history, the 31 scientists unanimously called for a halt to the killing for one year.

Rep. Paul N. McCloskey, a U. S. delegate to the IWC meeting, commented that "the Executive Branch of the U. S. Government has been delinquent" in controlling the bowhead kill. Indeed, it was only in June of this year that the National Marine Fisheries Service moved to declare the bowhead population depleted, the first step toward imposing regulations on the Eskimos. Three years ago, Monitor groups petitioned the NMFS to find the bowhead depleted.

The chairman of the IWC scientific committee, Dr. K. Radway Allen of Australia, warned that the biological survival of the bowhead was at stake, and therefore "all exploitation should stop."

The U. S. delegation sat in embarrassed silence as the Danish whaling

commissioner, Einar Lemche, observed acidly: "The United States has been conservative in all whaling matters except its own whaling."

The U. S. has the opportunity to raise the bowhead issue in December when the IWC holds a special meeting in Tokyo. If the U. S. can present a credible proposal for a strictly-controlled bowhead take, based upon historical kill-rates and without the atrocious waste of recent years, then we believe the IWC will agree to reinstate the aboriginal exemption, possibly for the 1978 spring hunt.

The IWC sets whale quotas for one year at a time. Next June, if not in December, the IWC will again reconsider the status of the bowhead and aboriginal whaling.

Even if the December meeting should reject a spring hunt, it would be no great tragedy for the Eskimos to halt the killing for just one year. Every Eskimo village has had several years this century when no whales were caught. This was caused by ice and weather conditions and the inability of the Eskimos to kill and secure the whales.

The Eskimo villages were not wiped out in those years when there was no whale kill. Indeed, the largest whaling village by far, Barrow, has had seven zero-kill years, including a three-year stretch (1957-59). Barrow has grown steadily despite those years of no whales.

The one hard truth in this controversy is that the bowhead whale population cannot survive the uncontrolled and increasing destruction by the Eskimo whalers.

There is very little tradition left in modern Eskimo whaling. The real traditional kill of bowhead whales averaged less than 10 whales per year between 1942 and 1969. Since 1970, the level of hunting has expanded several times. The average kill has been almost 30 per year, with three times that number struck but lost.

This extraordinary increase has been caused by the rising affluence in Eskimo villages. Young men working in oil and construction had money to buy boats, outboard motors, and bombs. Totally inexperienced in the skills of harpooning and securing a whale, these new whalers have decimated the bowhead stocks.

The natural growth rate of the bowhead stock is believed to be about three or four percent per year. The Eskimo take in recent years has far exceeded this rate. We must therefore assume that the already-endangered species is becoming more endangered each year. Eskimo society will suffer far more if they extirpate this marine mammal, around which so much of their culture revolves, than if they are forced to reduce or temporarily halt the killing.

We must recognize that tens of thousands of other peoples around the world have suffered heavily because of the strong whale-conservation measures adopted under U. S. leadership. The major whaling industries in Japan and the Soviet Union have been forced to lay off thousands of workers, most of them older employees who have spent a lifetime in whaling. The President's Council

on Environmental Quality estimates that the reduced IWC quotas have cost the foreign whaling industries more than half a billion dollars in gross value of whales.

If the U. S. were to file an objection to the bowhead quota-- an insignificant cutback compared to the tens of thousands of whales cut from Japanese and Soviet quotas-- then we would be telling the world that there is a double standard in whale conservation.

The credibility of the United States and our sorely-needed leadership in protecting our planet's ecosystem would be severely damaged by an objection.

Respectfully,

A handwritten signature in dark ink, reading "Craig Van Note". The signature is fluid and cursive, with a long horizontal stroke extending from the end of the name.

Craig Van Note
Executive Vice President

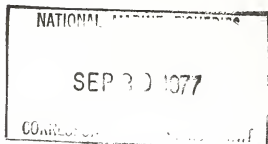


National Museum of Natural History • Smithsonian Institution

WASHINGTON, D.C. 20560 • TEL. 202-

15 September 1977

Mr. Robert Schoning, Director
National Marine Fisheries Service
Washington, D. C. 20235 USA



Dear Mr. Schoning:

I have studied the DEIS on the IWC's deletion of Native Exemption for the Subsistence Harvest of Bowhead Whales. I believe that for it to maintain its credibility as world leader in the drive for conservation of the remnant stocks of whales, the USA is obligated to support the moratorium on all killing of bowhead whales. I do not see any alternative to this.

The US is also obligated to its native Eskimo citizens. Several things are obvious as regards Eskimo whale killing. One is that survival of the tradition of whale killing is of utmost importance in some Eskimo societies. Two is that some Eskimos have departed rather far from tradition in applying modern technology to whale killing. Three is that Eskimos are making an increasingly significant impact on the fragile population of bowheads.

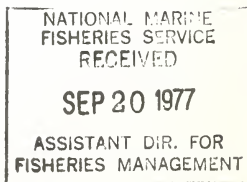
Given these facts I would recommend that the US support the moratorium, but at the same time move as rapidly and with as little dislocation as possible to accommodate Eskimo traditional whale killing and to protect Eskimo culture in a responsible and concerned manner. Knowledgeable cultural anthropologists should be consulted immediately for advice on procedures for maintaining an optimal cultural state, consonant with reduction of impact on bowhead populations. Actual killing should be gradually replaced with symbolic killing. Achieving these goals will require not only limiting kill, but also banning some or all non-traditional means of killing, along with educating the Eskimos. This should all meld with an effort to reduce the "killed but not recovered" figure to a more reasonable level, along with a gradual phasing out of killing altogether.

At the earliest opportunity the IWC should be petitioned to grant an exception for the Eskimos to kill bowheads, contingent upon implementation of the plan for preserving both the Eskimo traditional culture and the bowhead whales.

Sincerely,

Charles O. Handley, Jr.

Charles O. Handley, Jr.
Curator
Division of Mammals



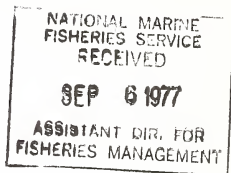


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Reply to: **ANIMAL PROTECTION INSTITUTE**
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Washington, D.C. 20003
202/543-7450

MEMBER
WORLD FEDERATION
FOR THE
PROTECTION OF ANIMALS
ZURICH, SWITZERLAND

August 31, 1977



Mr. Robert Schoning, Director
National Marine Fisheries Service
Washington, D. C. 20235

Dear Mr. Schoning:

These comments are in regard to the Draft Environmental Impact Statement on the deletion of the native exemption for the subsistence taking of bowhead whales.

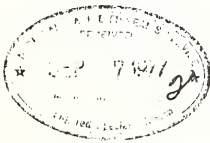
Although we are sympathetic with the plight of the Alaskan natives, we feel the exemption must be ended because of the increased wasteful take of this endangered species. If we accept the figure of 1,000 for the present bowhead population, the 5% per year removal rate is obviously imperiling survival of this species. We also fear that increased environmental pollution may further reduce the stock.

In addition, we are confident that the filing of an objection to the IWC resolution by the United States would result in a major setback for all whale protection measures and would also be deleterious to other international conservation efforts.

In view of the above, and on behalf of our 78,000 members, API urges that the native exemption be ended.

Sincerely,

Jane Risk
Jane Risk, Director
Eastern Region



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VAN NESS, CURTIS, FELDMAN & SUTCLIFFE

1220 NINETEENTH STREET, N.W.

WASHINGTON, D.C. 20036

J. LYNN SUTCLIFFE
HOWARD J. FELDMAN
~~XXXXXXXXXXXX~~
WILLIAM J. VAN NESS, JR.

SUITE 500
TELEPHONE:
(202) 331-9400

September 23, 1977

Mr. Robert W. Schoning
Director
National Marine Fisheries Service
NOAA, Department of Commerce
Washington, D.C. 20235

Dear Mr. Schoning:

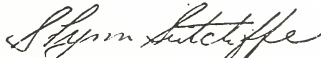
On behalf of our clients, the North Slope Borough, the Arctic Slope Regional Corporation and the Alaskan Eskimo Whaling Commission, we are submitting written comments for the record on the Draft Environmental Impact Statement respecting subsistence harvest of bowhead whales. Enclosed are two memoranda:

1. A memorandum discussing deficiencies in the draft EIS in the following areas:
 - a) the domestic and international regulatory context in which the decision to object or not object is to be made;
 - b) President Carter's position with respect to subsistence hunting of whales;
 - c) world opinion on native subsistence hunting rights;
 - d) the problems related to enforcing a ban on subsistence hunting of bowhead whales;
 - e) the IWC action at its next annual meeting;
 - f) nutritional impact of a ban on subsistence whaling;
 - g) scientific data unknowns; and
2. A memorandum discussing changes made from the 1st and 2nd drafts to the 3rd draft and final draft EIS that indicate deficiencies in the draft and in the process related thereto.

September 23, 1977

There are many other deficiencies raised in the hearings which we are not reiterating here. The enclosed memoranda highlight major deficiencies in the draft EIS and in the process that led to it. After a thorough review of the hearing record which has not been possible in the time between the completion of the hearings and the end of the comment period, we may be in further communication with you.

Sincerely yours,



S. Lynn Sutcliffe

SLS/cih

Enclosures

RE: DEFICIENCIES IN THE DRAFT EIS ON THE NATIVE EXEMPTION FOR
THE SUBSISTENCE HARVEST OF THE BOWHEAD WHALE

A. DOMESTIC AND INTERNATIONAL REGULATORY BACKGROUND (pp. 5-16 DEIS)

The DEIS describes the regulatory background of the IWC's decision to ban subsistence hunting of the bowhead whale but fails to discuss important issues concerning the IWC's action and the context in which that action occurred. There is inadequate discussion of the following issues:

1. The action of the U.S. following each year's expression of concern by the Scientific Committee;
2. The consideration required for consumer interests by the 1946 treaty;
3. The legal argument that the IWC does not have jurisdiction over subsistence whaling; and
4. The Marine Mammal Protection Act and the trust responsibility to Eskimos.

Without a full and complete discussion of these issues a reasoned decision as to which course or action should be pursued is not possible.

1. The action of the U.S. following each year's expression of concern by the Scientific Committee.

The action of the U.S. from 1972 through 1977 and the action of the U.S. delegation at this year's IWC meeting are relevant parts of the regulatory background. Every year since 1972 the IWC Scientific Committee has expressed concern and sought information on the bowhead. Notice of this concern was not conveyed to native whalers through their local government until January of 1977. Even then the natives were not told that there was even the remotest possibility that the IWC or any other entity would recommend a moratorium. This bypassing of the natives is not

clearly disclosed in the DEIS. Failure to make clear the malfeasance of the National Marine Fisheries Service distorts environmental assessment parameters, particularly those related to the feasibility of self-regulation by the Eskimos. How can self-regulation ensue when notice is not given?

In the short period of time since notice has been given, the Eskimos have already created a new institution, the Alaska Eskimo Whaling Commission. They have agreed on a structure, they have elected Commissioners, they are proposing research, and they are exploring what kinds of rules are necessary to add to existing rules. More action has been taken by them in 2 months than has been taken by the NMFS in 5 years. Moreover, their cultural institutions will provide a better framework for research and regulation than the federal government could provide. The final EIS should address the opportunities for self-regulation.

The deliberations of the Scientific Committee are discussed at length in the DEIS. But the DEIS does not point out that the 1976 Resolution only recommended limiting the expansion of the fishery and reducing the loss rate of struck whales. When the Scientific Committee found that while there had been no expansion of the fishery in 1977 (although there had allegedly been an increase in struck and lost whales) the next logical step for the IWC would have been to establish a limit on the expansion of the fishery and on the loss rate. A moratorium seems to be out of proportion to the previous year's recommendations. The DEIS fails to point out how the IWC overlooked its previous recommendations, took an illogical step and sought an immediate moratorium. This fact has an important bearing not only on the equities involved but also on whether there was scientific bases for a moratorium. If there were scientific bases, why did U.S.

Finally, the actions of the U.S. delegation at the meeting in Australia were not discussed in the DEIS. Members of the U.S. delegation were actively lobbying other nations to vote yes for the moratorium even though the official position of the U.S. was to abstain. These actions were in derogation of the rights of the Eskimos and may have been in violation of U.S. criminal law.

Another deficiency in the DEIS is the failure to disclose that the U.S. Commissioner had an opportunity to defer official notification of the moratorium until September 24, 1977. This would have preserved the U.S. right to object until after the November meeting of the Scientific Committee, thus leaving open another option. This opportunity was not accepted. The final EIS should point out that the position the U.S. finds itself in now is due to the failure of the government to take appropriate action in previous years and the failure of the U.S. delegation to the IWC this year to represent the interests of the United States and its Eskimo citizens intelligently. All these matters bear on the final environmental assessment.

2. The consideration required for consumer interests by the 1946 treaty.

The 1946 whaling treaty specifically requires that amendments to the Schedule "shall take into consideration the interests of the consumers of whale products and the whaling industry." (Art. V §2(d)) The preamble to the treaty recognizes "that it is in the common interest to achieve the optimum level of whale stocks as rapidly as possible without causing widespread economic and nutritional distress." There is no evidence that consideration was given by the IWC to the needs of the Eskimos-

of the moratorium. This fact should be a part of the EIS.

It should also be noted in the EIS that the U.S. government and conservationists have been trying for several years to have a new convention drafted, precisely because the present convention takes into account consumer interests and allegedly does not safeguard conservation interests strongly enough.

3. The legal argument that the IWC does not have jurisdiction over subsistence whaling.

The draft EIS does not explore or raise the question of whether the IWC has jurisdiction to ban subsistence hunting by Alaskan Eskimos. This is a fatal deficiency in the DEIS. Since the IWC has never in its history attempted to regulate aborigine subsistence whaling, this seems an obvious question to be raised, either as part of the regulatory background or in the discussion of alternative actions available.

Our research indicates that the 1946 Convention as a matter of law does not apply nor was it ever intended to apply to Alaskan Eskimo whaling. The Convention was developed to regulate only whaling involving factory ships, land stations and whale catchers or whaling in waters in which such factory ships, land stations, and whale catchers operate. Whale catchers are defined as "ships" and cannot include aborigine boats. The exemption in the Schedule permits gray or right whales to be taken by commercial means when their meat and products are to be used by aborigines. The jurisdiction of the IWC cannot be increased by an amendment to the Schedule; only a new treaty can add to present jurisdiction over commercial whaling operations.

The New Management Procedure, on which the Scientific Committee relies so heavily, refers only to the circumstances

under which commercial whaling shall be permitted. The term "commercial" is inapplicable to aborigine whaling because of the difference in the whaling methods used, the difference in scale, and the difference in the motive and the use of the products.

The 1949 Whaling Act has the same focus on commercial whaling. The executive branch has never applied the licensing provisions in the 1949 Act to aborigine whaling.

A final EIS must include an analysis of whether the IWC has jurisdiction over bowhead hunting by Alaskan Eskimo. In our opinion that analysis will moot the very questions being addressed in the EIS.

4. The requirements of the Marine Mammal Protection Act and the trust responsibility to Eskimos.

The draft statement does not adequately discuss the protections given by law to the Eskimos. It makes reference to the expectation of federal regulation of the hunt whether or not there is an objection to the IWC action. The statement neglects to note that such federal regulation can occur only when specific findings are made and only after the due process procedures of the MMPA are followed. The MMPA provides that:

The provisions of this title shall be deemed to be in addition to and not in contravention of the provisions of any existing international treaty, convention, or agreement, or any statute implementing the same, which may otherwise apply to the taking of marine mammals. 16 U.S.C. §1383 (1972)

Thus, the provisions of the Whaling Act of 1949 are supplemented by the provisions of the MMPA. The due process requirements are "in addition to" the provisions of the Whaling Act.

The trust responsibility of the federal government to Eskimos is not ever mentioned in the draft EIS. That responsibility belongs not just to the Department of Interior but to the entire federal government and should have been a factor influencing the U.S. delegation to the IWC. That responsibility is recognized in the MMPA establishment of the Marine Mammal Commission. The Marine Mammal Commission has seven statutory duties, one of which is to:

recommend to the Secretary, other appropriate Federal officials, and Congress such additional measures as it deems necessary or desirable to further the policies of the Act, including provisions for the protection of the Indians, Eskimos, and Aleuts whose livelihood may be adversely affected by actions taken pursuant to this Act. (§202(a)(7)) (emphasis added)

To date we have not seen a recommendation from the Marine Mammal Commission on this matter. The duty to consult with other responsible federal officials would seem to mandate that comments on the trust responsibility be solicited and included in the EIS.

B. PRESIDENT CARTER'S POSITION. (p. 64 DEIS)

President Carter's message to the IWC contains specific references to commercial whaling:

Just one month ago, in my Environmental Message to the Congress of the U.S., I reaffirmed the continued support of the U.S. Government for the ten-year worldwide moratorium on commercial whaling and prohibition of commercial whaling within our two-hundred-mile fishery zone. (June 15, 1977) (emphasis added)

The message does not refer to aborigine whaling. A position in favor of conservation and a moratorium on commercial whaling

does not conflict with preservation of the Eskimo whaling for subsistence purposes. In fact, a denial of Eskimo rights would conflict with President Carter's repeated recognition of the need to demonstrate to the world this country's commitment to human rights:

I want to make sure that we eliminate in our own country those vestiges of hatred or discrimination or deprivation of human rights that we still retain so that when we do criticize other countries, or when we do speak out to deplore the loss of those rights on other nations, that we, ourselves, might be free of justified criticism.

(Remarks of the President at the Dept. of States, Feb. 24, 1977.)

But when we pursue aggressively and with determination our commitment to the principal that human beings are to be well treated by governments, that human freedom is one of the highest aspirations and commitments of our country, I think this is the right thing to do. If it hits ourselves as self-criticism, so be it. If it touches the Soviet Union and they interpret it as intrusion, so be it. But we have tried to make this a broad-based approach.

(Press Conference No. 9 of the President, June 13, 1977)

The Eskimos are one of the minority groups who have a history of being ignored or discriminated against. In contrast, the rights of the aborigines in the U.S.S.R. have been accorded relatively strong protection by their government. Thus, it is particularly incongruous for the draft EIS to say that "Filing an objection would contradict President Carter's public statements and actions of the last four months."

(p. 64, DEIS) There is assuredly no contradiction and the President's stand on human rights at home would support, if not require, that the government take affirmative action to protect native rights on a national and international level. The trust responsibility of the government for natives further emphasizes the need for human and dignified treatment. Neither of these facts, however, are discussed in the DEIS.

President Carter's own words on the subject of American Indians and the trust responsibility of the federal government are:

I am deeply concerned with the present condition of American Indians, and believe there must be a greater sense of federal responsibility to meet our obligations to them. We must obey and implement our treaty obligations to the American Indians, and in so doing, I pledge an all-out effort to assist in the protection of their land, water and their civil rights.

As part of my reorganization of government, I will review and revise as necessary the federal laws relating to American Indians and the functions and purposes of the Bureau of Indian Affairs. The guiding principles of my review will be a strengthened reaffirmation of our legal and moral trust responsibilities to the American Indians, and a strong personal respect for the dignity of each of our first Americans.

(Pre-Convention Statement #92, available from Democratic National Committee.)

This is a part of the background for the action to be taken and should be included in the EIS.

C. WORLD OPINION. (p. 65 DEIS) The draft EIS asserts that a U.S. objection could have severe repercussions on other international conservation interests. It should be noted that the international community is not insensitive to the needs of aborigine peoples. For example, at a 1975 meeting of the International Union for Conservation of Nature and Natural Resources (with representatives from 67 countries), the following resolution was adopted:

5. Protection of Traditional Ways of Life
The 12th General Assembly of IUCN:

Recommends

- (1) That governments maintain and encourage traditional methods of living and customs which enable communities, both rural and urban, to live in harmony with their environment;
- (2) That educational systems be created to emphasize environmental and ecological principles and conservation objectives derived from local cultures and traditions, and that these principles and objectives be given wide publicity;
- (3) That governments devise means by which indigenous people may bring their lands into conservation areas without relinquishing their ownership, use, or tenure rights;
- (4) That the governments of countries still inhabited by people belonging to separate indigenous cultures recognize the rights of these people to live on the lands they have traditionally occupied, and take account to their viewpoints;
- (5) That in the creation of national parks or reserves indigenous people should not normally be displaced from their traditional lands, nor should such reserves anywhere be proclaimed without adequate consultation with the indigenous people most likely to be directly affected by such proclamation; and
- (6) That existing natural values be respected and integrated in the early planning stage of every urban or industrial development scheme, this requiring that ecological principles be taken as the basis for all planning.

It should also be noted that this international body called for a replacement of the principle of maximum sustainable yield as being too narrow for adequate management decisions:

8. Principles Replacing Maximum Sustainable Yield as Basis for Management of Wildlife Resources

Recalling that IUCN with the US National Appeal of the World Wildlife Fund and other organizations, sponsored a programme of workshops on wild and living resources which was completed this year, the main conclusion of which was that Maximum Sustainable Yield and other single species management concepts are not adequate as a basis for management of wild living resources, be based on ecological relationships according to the following principles:

- (1) the ecosystem should be maintained in such a state that both consumptive and non-consumptive values can be realized on a continuing basis, ensuring present and future options, and minimizing the risk of irreversible change or long-term adverse effects;
- (2) management decisions should include a safety factor to allow for limitations of knowledge and imperfections of management;
- (3) measures to conserve one resource should not be wasteful of another; and
- (4) survey or monitoring, analysis and assessment should precede planned use, and accompany actual use, of a resource and the results should be made available promptly for critical public review;

The 12th General Assembly of IUCN:

Calls to the attention of governments and international organizations, such as the International Whaling Commission, which are concerned with the management of Wildlife, including marine resources, the results of this programme including its statement of principles, and Recommends that as far as possible, these new principles be applied to the management of wild animal resources.

There is substantial support within the U.S. conservationist community for subsistence hunting. Many conservationists recognize the dependence of native cultures on hunting and they

further recognize the need for native involvement in the design and enforcement of conservation programs. Thus, conservationist groups have called for an objection both to preserve the Eskimo and to allow for a native management program.

The U.S. must reaffirm its support of both conservation and human rights. An objection will encourage a self-regulatory conservation program while a moratorium will lead to a complete lack of management and cooperation in research and enforcement. An expanded research program, funded in part by the Eskimos, will enhance the U.S. role as a leader in conservation. The U. S. can diplomatically get itself out of the position into which it has undiplomatically gotten itself. The negative impact of an objection on worldwide conservation efforts is overstated in the draft EIS. The positive impact of an effective enforcement and research program is not addressed and should be, particularly in view of the Eskimo actions taken since the IWC meeting.

D. ENFORCEMENT. (pp. 66-67 DEIS) The difficulty (or impossibility) of enforcement relates not only to the whale moratorium but also to increased enforcement efforts that will be needed for other species. There is already a problem with enforcing regulations on fishing and on caribou hunting. Those problems will be exacerbated by a ban on bowhead whaling, both because of greater hunting of other species and because of native hostility stemming from a ban on whaling. In addition, there is likely to be a problem with other regulated species, for example, the beluga, polar bear, walrus, and migratory birds.

However, no mention is made of current enforcement problems in the draft EIS and thus the seriousness of enforcement problems is underplayed. In contrast, the 1st draft had a lengthy discussion of enforcement problems, including the likelihood of mass resignations in the National Guard if they were to assist in enforcement (see attachment #1)

E. IWC ACTION AT NEXT MEETING. The DEIS makes repeated reference to reconsideration of the native exemption at the next IWC meeting. Such reconsideration cannot be presumed. The writers of the DEIS make such a presumption. Even if the United States makes a good faith effort to get the Commission to reconsider, there will be little additional research data for the Commission to consider. Thus, it may be questioned whether there will even be serious consideration given by the Commission. The outcome of the Commission's deliberations is even more dubious if the views of the U.S. delegation serves as an indication. Resentment at U.S. efforts to curtail other nation's whaling is also a factor which may mitigate against a favorable outcome for the natives. It is, therefore, misleading to suggest that the IWC action is only temporary, for it will require another amendment and a 3/4 vote to change the action taken this year. It is misleading to suggest so strongly that Eskimo cooperation in enforcement will result in a restoration of the native exemption next year.

Great concern is expressed over the possible loss of U.S. leadership in whale conservation if an objection is filed. But the DEIS fails to pose or answer the following questions: Will there not be the same loss if the U. S. tries to restore the native exemption next year? Will there not be an even greater loss of leadership if the U.S. does not file an objection and is unable to enforce the moratorium (which is a very real possibility)?

F. NUTRITION.

Documentation of the nutritional impact of a moratorium is inadequate in at least four respects:

1. Lack of other fish and game;
2. Inadequacies of welfare program;
3. Cost to government of providing welfare; and
4. Impact of welfare on natives.

There is more specific information available than was included in the draft EIS. In some instances specific language in earlier drafts was replaced by vague references in the final draft.

1. Lack of other fish and game. The attached letter from the Alaska Department of Fish and Game (Attachment #2) documents the unavailability of alternative wild sources of protein. This specific listing shows that the native subsistence lifestyle would be destroyed by a moratorium on whaling. That lifestyle would not be replaced by a self-sufficient economy, but rather by massive welfare programs.

2. Inadequacies of Welfare Programs. The State Division of Public Assistance (DPA), the Bureau of Indian Affairs (BIA) and RurALCAP all have welfare programs that may be used to provide food when traditional sources of food are limited. Each agency has a variety of programs, with different certification procedures and levels of benefits. Although there are efforts at cooperation among the agencies, these efforts are not completely successful. There have been instances of long delays in obtaining benefits and many eligible persons are not receiving food stamps. (According to one 1976 report, 86.5% of eligible persons were not receiving food stamps.) The Food Stamp program has been repeatedly criticized for not taking into account the extremely high prices in remote areas of Alaska. The DEIS notes that "food prices in whaling villages are very high." An HEW report shows that prices in Nome and Bethel are almost 200% of prices in Seattle and even higher when food is reshipped from these towns to smaller villages. There is no indication in the DEIS as to the existence of these problems or how they could be mitigated.

Even if the problems of coordinating the various programs to provide an adequate level of benefits could be solved, there may still be the additional problem of inadequate supplies in retail food stores.

3. Cost to government of providing welfare. No estimate is given in the DEIS of the additional cost that will be incurred when a source that provides 70% of the food in some seasons is

taken away. Since the agencies will have to find a source for the additional funding, it seems reasonable to make at least a rough estimate of the amount of money that will be needed to provide food and whatever administrative staff is required.

4. Impact of welfare on natives. As noted elsewhere, the lifestyle of the Eskimos has been severely strained by the changes brought on by the impact of Western culture. The Eskimos are already paying a heavy toll in disintegration of their social structure. A massive welfare program can only worsen the problems caused by existing external pressures. The draft EIS only refers to the need for "evaluation" of welfare programs and their social effects. (p.59) Surely the deleterious effects can be anticipated. The alternative of going ahead with a potentially disastrous action and then merely planning to evaluate the results is not adequate. The EIS process should be used to evaluate the likely consequences in advance. This is not done by statements of the need for evaluation after the fact.

These comments of Dr.Christine Heller; a dietary specialist in Alaska, were deleted from an earlier draft of the draft EIS:

The importance of Bowhead whales and other marine mammals in the diet of Eskimos cannot be emphasized too much. Where available, they are the major source of protein, B vitamins and calories; the fat also provides vitamins D and A.

Most of the food shipped into Eskimo communities are calorie food and very few vegetables /sic/. These imported foods cannot take place of whale and other marine mammals. Seals, Beluga and Bowhead whales are absolutely necessary in the diets of Eskimos.

If Bowhead whales were eliminated as a food source for Eskimo people, welfare costs would have to be increased. More food would have to be shipped in. I don't think such a welfare plan is sensible from a health stand -- point and it would deaden the initiative of the native people (Davidson, 1972).

G. SCIENTIFIC DATA UNKNOWNNS

The draft EIS fails to make two important points: the speculative nature of the data available to the Scientific Committee and the inclination of the Scientific Committee to make the most conservative decision.

The existence of a scientific model and the use of statistics in that model give an illusion of certainty and exactitude to the decisions of the Scientific Committee. The Commission by relying on the scientists' recommendations, seeks to avoid the appearance of being influenced by economic and political considerations. In reality, the economic and political factors are still considered but by pressure brought to bear on the scientists rather than by frank discussion by the Commission. (See, Scarff, J.E., The International Management of Whales, Dolphins, and Porpoises: An Interdisciplinary Assessment, 6 Ecology L.Q. 323, 417-425 (1977).) This results in an inadequate consideration of those factors by the Commission and in an improper delegation to the Scientific Committee.

The report of the Scientific Committee on the Bowhead is based on widely varying estimates of the present population of the Bowhead and of the "initial stock size."

The Committee apparently (but not explicitly) accepted an estimate of initial stock size of from 11,700 to 18,000. This estimate is 300% larger than an estimate made in 1974 of 4,000 to 5,000 which was apparently rejected by the Scientific Committee. No reason is given to support one figure or the other as scientifically more valid.

Similarly, the estimates of present population size are widely varying. An earlier draft reported that three scientists viewed the population trend as increasing. The Department of Commerce report on the bowhead whale in the August 1977 Federal Register (see Attachment #3) also noted that the trend was increasing. If there are disagreements among scientists, they must be discussed so that the reader of the EIS can make some judgment of the certainty of scientific opinion.

The Scientific Committee Report notes that "available evidence shows no increase in loss rates from 1920-1975, but recent catches are increasing." The high loss rates about which the Committee was concerned occurred in only two years, 1976 and 1977, and their validity has been repeatedly challenged by the whalers.

Mention is made of the "potential pollution hazard associated with petroleum development," but no estimate of the likelihood or severity of the risk is given. And the alternative of ceasing such development in order to protect the Bowhead Whale is not even casually explored.

It is clear that the Scientific Committee has opted for a conservative decision, in the absence of data on which to base a more informed decision. However, is it proper for the DEIS to call such a decision "scientific"? We would argue that the action of the Scientific Committee rather reflects the conservationist philosophy advocated by the United States for many years. That philosophy is inconsistent with the management purposes of the treaty as stated in the Preamble. Indeed, the United States is pressing for a new treaty precisely because the 1946 Convention is a management-oriented treaty.

ENFORCEMENT - DRAFT NO. 1

Since the bowhead hunt is deeply ingrained as part of the Eskimo culture, in addition to its value as a food, the social response to the hunting ban will be one of total non-acceptance. This will be expressed by a complete severance of cooperation and communication related to agency interests in research or management and will extend to unknown levels of physical resistance.

Enforcement action will have to be carried out by the government in an arena of total non-cooperation and heavy resistance. The Department of Interior has already experienced this kind of reaction in their attempt to ban native subsistence hunting of waterfowl.

Climate and terrain are limiting factors in this enforcement situation and must be viewed in context. In general, only Eskimo people live and work in this surrounding. It is significant that the military, with the exception of Eskimo Scouts of the National Guard, does not operate in this terrain.

To meet and deal with the coastal residents, visitors to the arctic either are totally dependent on the cooperation of residents for basic food, shelter, and transportation, or the necessities will have to be transported to the villages at considerable expense. In the event of a total ban on bowhead whaling, a complete lack of cooperation from the villagers is a certainty and NMFS enforcement agents will have to maintain a self-sustaining operation. Land ownership could present legal hurdles in establishing operational bases since some of the airports are now on private land.

Enforcement of the regulations will be difficult and will require a large field staff of NMFS enforcement agents. Since a total closure will not receive public support or normal levels of public compliance, the enforcement function will involve overwhelmingly repressive measures and will result in seriously damaged relations with the Eskimos in all aspects of wildlife conservation.

Attempted use of the National Guard (Eskimo Scouts), which has elements in every coastal village, to assist NMFS enforcement agents in enforcing the regulations probably would fail through mass resignations if given such an assignment.

Working from self-sustaining bases, NMFS Agents could patrol main trails by snowmachine and visit seal and duck hunting camps. They would have no contact with, or view of, hunting parties operating in boats. Light plane flights, weather permitting, would provide visual coverage of boat hunting and might locate illegal kills. Patrolling by boat (and the attendant problems of safely moving it over the shifting ice) is not a viable option in this socially hostile environment.

Regulations implementing this hunting closure will need to address possession and transportation as well as taking. Since other whale hunting (beluga and gray) will continue during the closure on bowheads, a situation will occur where hunting parties are routinely whaling in proximity to the closed species.

We anticipate that some bowheads will be shot and either brought to shore surreptitiously or be left on the ice and become valued items for salvage. If no individual can be charged with the taking of the whale we must address the problem of possession, which could involve most residents of the small (not over 400 people) Eskimo villages. In the event of seizing an illegal whale along the coast, we would face the irony of having to dispose of the animal through the usual non-profit channels which would mean simply giving it to the nearest consumers.

Concerted efforts by the Eskimos to thwart enforcement of the regulations can be expected to occur. Mass arrests of individuals for possession would entail problems concerning manpower to carry out such an action, and because of lack of facilities for housing large numbers of people, the immediate availability of aircraft to transport them to detention areas. Other actions by the villagers, including violence, could make it extremely difficult to enforce a ban on bowhead whaling.

A total ban on bowhead whales is expected to endanger total resistance from the native group and their supporters so as to make enforcement of the ban impossible. Precedence for such action was established by the Department of the Interior's unsuccessful attempt in the early 1960's to regulate the hunting of waterfowl in Alaska. Failure of the U. S. government with that problem is now cited as evidence of native subsistence rights, and strongly influences the native view of whaling.

ENFORCEMENT - FINAL DRAFT EIS

1. Enforcement

Enforcement of wildlife regulations in arctic areas of Alaska is difficult. There will, no doubt, be some problems associated with enforcing a total ban, and these are set forth below. Problems may be somewhat ameliorated if the Eskimo communities are made aware that the harvest ban is not necessarily permanent and that reasonable cooperation with enforcement efforts, and in supporting scientific research activities, could result in action by the IWC to allow some harvest in future years.

Most Eskimos will be opposed to a complete harvest ban because of the dependence on bowheads for food, and because of the significance of the whales to their culture.

Bowheads are hunted from field camps at the edge of the fast ice, often many miles from shore. Beluga hunting is carried out from the same camps and will continue to be legal. Because of the harsh climate and dangerous ice, and the fact that beluga and seal hunting will be occurring, policing of camps will be difficult.

Whaling villages are located in an area which extends over 600 miles. No roads exist between the villages. Whaling camps may be distributed over a distance of 20 miles or more and access is only by snowmobile.

If a bowhead whale is taken the problem of possession will arise, which could involve most people in an Eskimo village.

Enforcement activities, such as aerial surveillance of open water or snow machine travel among all hunting camps, will disrupt village routines of seal, walrus, and bird hunting, etc. This could have a significant impact on normal, and essential, levels of village subsistence activities.

DEPARTMENT OF FISH AND GAME

OFFICE OF THE COMMISSIONER

SUBPORT BUILDING - JUNEAU 99801

August 31, 1977

Ellen Partridge
1220 19th Street N.W.
Suite 500
Washington, D.C. 20036

Re: Telephone Conversation - Bowhead Whales (8/29/77)

Dear Ms. Partridge:

I shall attempt to respond briefly to your inquiry about the availability of alternative wild resources in the event that the taking of bowhead whales by coastal residents of Northwest Alaska and Northern Alaska is eliminated. There are a number of wild resources potentially available to these individuals. In addition, the economy of North-western and Northern Alaska has changed dramatically with the advent of oil exploration, development and production, inauguration of commercial fishing, and the proceeds of the Native Claims Settlement Act. Nevertheless, a number of individuals and villages are so situated that a substantial portion of their livelihood is gleaned from the land, inland waters and seas of the area.

I will list the various resources and provide a short summary statement about each. This letter then should form the basis for additional inquiries should you have need for in depth information. The resources are as follows: (1) Caribou - The Northwest Arctic Herd formerly in excess of a quarter of a million has decreased over the past five years to approximately 60,000 to 75,000 animals and it has been necessary to limit the annual harvest to 3,000 males. The bag limit is one per person. Caribou are of importance to almost all coastal residents and potentially are an alternative to the use of whales but at this unfortunate time their numbers have been reduced and human use must be restricted until they have recovered.

(2) Waterfowl - In spite of treaty limitations coastal residents have had unlimited access to waterfowl during the short summer and fall. While waterfowl are sufficiently abundant, in most instances, to withstand additional use it is doubtful that they will provide a viable alternative to whale meat because of individual preferences.

(3) Seals - In northern Alaska ringed and bearded seals are the common seals whereas in northwestern Alaska some village have access to ringed, bearded, ribbon, and largha or harbor seals. Again, these populations are all considered at O.S.P. and could withstand additional use if the people so desire. The advent of the resumption of management authority by the state will make them a viable alternative in that the state will allow the sale of hides. This could be a small but very important supplement to the cash economy of a number of villages.

(4) Bears, Polar - The annual harvest is determined to a considerable extent by the pack ice distribution and polar bears must be considered a minor element in the diet of the residents in northwestern and northern Alaska. Skins are potentially very valuable and will be eligible for sale should the state regain management authority. Approximately 100 to 200 bear are harvested annually by residents of the area under discussion.

(5) Bears, Brown/Grizzly - These creatures are an insignificant factor in the diet of humans and could not withstand much additional pressure. They are taken as opportunity arises by residents of the area.

(6) Small game - Hares, Ptarmigan, Grouse, Ground Squirrels, and Marmots. These creatures are used extensively where available but the supply is variable and cyclic. Generally, the populations can withstand additional pressure but again it is doubtful that they will make up for the lost whale protein.

(7) Vegetation and Fruit - The people of the region make extensive use of the local greens (green plants) and fruit such as cranberries, blueberries, and moss berries. No doubt some increased use could be directed to these resources without harm but again they will not offset the protein loss associated with the cessation of whaling.

(8) Dall Sheep - Only the people of Kaktovik and to a lesser extent a few of the villages along the Kobuk and the Noatak take advantage of sheep populations which are some distance from the inhabited areas and it is doubtful that they could withstand significant additional use anyhow.

(9) Moose - Moose are important locally particularly on the Seward Peninsula, Noatak, Kobuk, and the Colville Rivers. Some moose populations on the Seward Peninsula and Kobuk River could withstand additional hunting pressure. They are a potential alternative but an expensive one as it would require a long boat or plane trip to get to them. They are a desired food animal over much of the arctic where they are present.

(10) Furbearers - Prices for fur, particularly long haired fur such as fox, have been excellent for the past four or five years. Historically, fur prices fluctuate dramatically and they are not a stable core upon which to rest an economy. Nevertheless, a number of the areas could withstand additional trapping pressure and provide a cash alternative.

(11) Sea Birds and Eggs - Seasonally there are large numbers of sea birds and eggs available to some of the communities that would be affected. They are used at the present time. They are not a major component of the diet although they form an important supplement and could withstand additional pressure.

(12) Beluga Whales - They are used by some of the coastal villages in areas where it is possible to harvest them. It is our opinion that they could withstand an increased harvest, perhaps 350 to 500 animals without detriment to the population. Again, preferences and traditions are involved and I cannot evaluate the possibility or the probability of their use.

(13) Fish - Both commercial and personal use of fishes is taking place at the present time. I am not in a position to elaborate on the possible expansion of commercial fisheries or personal use fisheries. They are a very important component of the diet and they provide cash particularly in the Kotzebue area but it is not clear to me that expansion could take place at this time.

(14) Cash Economy - During the past quarter of a century and especially during the last decade many individuals residing in the affected area have opted for western culture and permanent jobs to the extent that they are available. There are not enough jobs for full employment but it has lessened the dependence of the people upon natural resources. Better estimates of the future of such employment might be obtained from the Alaska Department of Commerce or from the Native Regional Corporations. Surely, there will be increases in employment opportunities, especially in the government sector and in private industry but at an unknown rate.

(15) Social Assistance - A considerable amount of social assistance through the various Federal, State, and local welfare agencies already is going into the area but it is not a satisfactory alternative to traditional food gathering practices although such assistance is necessary in many individual situations.

(16) Regulated Harvest of Bowheads - Governor Hammond has already enunciated his belief that a regulated harvest with improved technology is preferable to abolition of the centuries old whale harvest. I believe his proposal most nearly satisfies the demands of the protectionists and of those dependent upon whales. It should be implemented.

(17) I'm confident the cultural significance of whales will not be forgotten. These people have an extremely strong desire to hunt. The food and other products realized from whales is highly desirable and beneficial, they also are an integral part of their culture and it would be unfortunate to further hasten the demise of their traditional ways through abolition of this harvest unless absolutely essential in order to perpetuate the species.

August 31, 1977

Well, I've rambled on in somewhat a disjointed way and I believe I've touched upon most of the available resources, at least sufficiently to let you know what species might be available but only the people themselves can decide among their preferences.

Sincerely,

A handwritten signature in dark ink, appearing to read "Robert A. Rausch". The signature is stylized with a large, looping initial "R" and a trailing flourish.

Robert A. Rausch

Director

Division of Game

39010

NOTICES

whales and routinely report them to the International Whaling Commission. The National Marine Fisheries Service is conducting research on the summer grounds in southeastern Alaska and the winter grounds around the Hawaiian Islands.

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BLACK RIGHT WHALE

(*Balaena glacialis*)

Distribution and Migration: This right whale inhabits all temperate waters of the world. It migrates between summering grounds in cool temperate waters and wintering grounds in warm temperate waters; the wintering grounds are mostly along continental coasts or around islands.

Three geographically isolated populations are recognized, one in the North Pacific Ocean, another in the North Atlantic Ocean, and a third in the Southern Hemisphere.

In the eastern North Pacific Ocean, the right whale ranges from Bristol Bay and the Gulf of Alaska south to lat. 50°N during the summer, and from Oregon south to central Baja California during the winter.

In the western North Atlantic Ocean, it ranges from Labrador south to the Bay of Fundy during the summer, and Massachusetts south to Florida and Bermuda during the winter.

Abundance and Trends: The right whale was originally very abundant, but heavy exploitation, mostly during the 19th century, reduced all populations nearly to extinction by the turn of the century. At least some local stocks have increased in recent years. Present numbers are: North Pacific Ocean—about 220 (Wada, 1975). North Atlantic Ocean—no estimate; Southern Hemisphere—about 3,200 (Masaki, 1975).

General Biology: The black right whale is a heavy-bodied animal up to 18.0 m long and is characterized by lack of a dorsal fin and by a large head with a narrow arched rostrum. It feeds main-

ly on copepods. The reproductive biology is poorly known. Body length at sexual maturity is about 15.2 m in males and 15.8 m in females. Mating and calving occur in the winter so the gestation period is probably about 1 year. The female probably bears a calf only once every 2 (or more) years.

Ecological Problems: None known.

Allocation Problems: None known.

Current Research: Research on the black right whale is being carried out by the South African Division of Sea Fisheries and off Argentina by a joint project of the National Geographic Society and the New York Zoological Society. Observers aboard whaling and research vessels record sightings of right whales and routinely report them to the International Whaling Commission.

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BOWHEAD WHALE

(*Balaena mysticetus*)

Distribution and Migration: The bowhead whale inhabits arctic and subarctic waters in four principal areas:

- (1) from Spitzbergen west to east Greenland;
- (2) in Davis Strait, Baffin Bay, James Bay, and adjacent waters;
- (3) in the Bering, Chukchi, Beaufort, and East Siberian Seas; and
- (4) in the Okhotsk Sea. They migrate with ice movements.

Abundance and Trends: All bowhead whale populations were decimated by the end of the 19th century because of the great value of this species for oil and baleen (Tomlin, 1957). No commercial whaling for bowheads has taken place since about 1915. Bowhead whales have been completely protected from commercial whaling by the International Convention for the Regulation of Whaling since 1947, and subsequently, by the Marine Mammal Protection Act of 1973 and the Endangered Species Act of 1973. These acts allow for a subsistence harvest of these whales by the Indians, Aleuts, and Eskimos. In the last two decades the take of bowhead whales by Eskimos in Alaska has varied between 1 (1959) and 48 (1976) (Maher and Wilimovsky, 1963; Marquette, unpublished records). Much of this variation in take is because of variation in hunting conditions, although in recent years

an increase in hunting intensity may have taken place. Bowhead whales are taken only occasionally by USSR nationals (Zemsky, 1973, pers. comm.). The bowhead whale population of Canada and the Bering, Chukchi, and East Siberian Seas appears to be increasing (Mansfield, 1971; Burns, pers. comm.). The stocks in the Spitzbergen area and the Okhotsk Sea are nearly extinct, but there have been a few sightings in these areas in recent years.

General Biology: Species Statistics.—The bowhead whale grows to 18 m in length. The color is generally black or dark gray, marked by some white, generally on the chin but sometimes also on the belly.

Reproductive Data.—Sexual maturity is reached at 11.6 m and 12.2 m in males and females, respectively. Mating probably occurs in early April or earlier. Gestation lasts 12 to 13 months, with a single calf (3-4.5 m long) born in April-May. The reproductive cycle is apparently 2 years long.

Age-Growth Data.—The calf is weaned at 6 months. Yearlings are from 6.7 to 7.9 m long. These whales travel singly, in pairs or threes during the spring. In autumn they are generally scattered, but may occur in groups of up to 50.

Feeding Habits.—The species feeds mainly on euphausiids and other krill, but occasionally on bottom-dwelling invertebrates.

Parasites and Diseases.—Bowhead whales appear to be remarkably free of external and internal parasites.

Ecological Problems: The north-slope oil project might alter the inshore southward migration should fall steamer and barge traffic increase to force the whales farther offshore.

Allocation Problems: Some conflict of interest may exist between the people who would like complete protection for bowhead whales and Eskimos who hunt these whales.

Current Research: The National Marine Fisheries Service contracted with the University of Southern California to gather biological data on bowhead whales in 1973. In the spring of 1973 a group of scientists from United States and Canadian universities attempted to record underwater sounds of the bowhead whale. The Fisheries Research Board of Canada makes annual surveys from planes of bowhead whales in Canadian waters. In the spring of 1974 the National Marine Fisheries Service re-instituted a research program on bowhead whale.

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M E M O R A N D U M

RE: EDITING CHANGES IN DRAFT EIS

The general slant of the editing changes from earlier to later drafts is in the direction of strengthening the case for not objecting by carefully changing word choices. This pattern is continued throughout the drafts as can be seen from the examples below.

Editing Changes Between the First and Third Draft EIS

Page 2: Under Impact on the Bowhead Whale, the first draft reads:

The action would probably allow for the more rapid recovery of an endangered species. However, the significance of this increase in rate of recovery is unknown.

The final draft reads:

This action will allow for the most certain recovery of an endangered species, if recovery is possible at all.

Page 2: A section in the first draft entitled Impact on Enforcement Capability was eliminated altogether in the final draft. This section reads:

Enforcement of a total ban on native subsistence take of bowheads will be extremely difficult because of social and geographical factors; it would be extremely expensive and involve hazardous risks to enforcement agents.

Page 2: The first draft reads:

D. Impact on Future Research and Conservation Efforts

The only significant source of biological research on bowhead whales will terminate with cessation of native whaling. Further research will be confined to visual observations. Additionally, Federal and State agency efforts in other conservation and resource management areas will be adversely impacted.

The final draft deleted the references to the adverse effect on other conservation efforts. "Visual observations" was changed to "non-destructive observations and beached specimens."

D. Impact on Future Research

The only significant source of material for age and reproductive studies of the bowhead will terminate with cessation of native whaling. Further research will have to be based on non-destructive observations and beached specimens.

Page 21. The first draft included a chart giving population estimates and 3 indications that the population trend was increasing. This chart was deleted in the final draft:

TABLE 2. Estimates of current population and trend of bowhead whales in the western Arctic Ocean

<u>Author</u>	<u>Year for Which Population Estimate was Made</u>	<u>Current Population Estimate</u>	<u>Population Trend</u>
Rice (1964)	1964	1,000	---
Rice (1974)	1974	minimum of about 400	No indication of change in this century.
Gambell and Brown (1971)	1971	1,000	---
Durham (1973)	1973	2,500	---
Harry (1973)	1973	1,000 - 3,000	---
Mitchell (1974)	1974	high hundreds-low thousands	"appears to be recovering well"
Fay (1975)	1975	1,000	increasing steadily
Scheffer (1976)	1976	2,000	---
Marquette (1977)	1976	---	slowly increasing
Report of I.W.C. Scientific Committee (1977)	1977	1,000	---

(CHART DELETED IN FINAL DRAFT)

Page 31: The first draft had the following remarks on the relationship of the increased kill to increased abundance:

It might be argued that the growing annual kill reflects an increased abundance of bowhead whales. Although OCSEAP data collected during the first year of surveys are insufficient to be indicative, other investigators previously cited in this report have concluded that the population is increasing at an unknown rate. Several Eskimos remarked about the large number of whales sighted during 1976, and correctly predicted that they were going to take many whales that year. Additionally, the prevalence of young animals in the catch might indicate a healthy increasing population. It follows that an increase in the number of whales would result in an increased kill, especially when accompanied by an increase in whaling effort.

In contrast, the final draft reads:

Although NMFS data are insufficient to be indicative, some investigators have speculated that the bowhead population increased at an unknown rate before 1970.

The increased kill may, in part, be due to an increase in the number of whales coupled with the increase in Eskimo whaling effort.

Editing Changes Between the Second and Third Draft EIS

Page 5: Under Description of the Proposed Action a line was added -- "Thus the effect could possibly be limited to a single hunting season" -- thus attempting to limit the scope of the impacts. Also in this section a line is dropped that indicated that the factors presented were "to be considered in finding an equitable solution for the recovery of an endangered species and the preservation of a native culture." All references to preservation of a native culture are deleted.

Page 7, S1: Drops reference to Endangered Species Act requirement that native take "materially and negatively" affects the species.

Page 9: Implies that threat of Pelly Amendment action has caused Soviet and Japanese compliance even though it was not applied. Sets out as fact what is very speculative.

Page 28, last S: The second draft did not contain this guesstimate but simply and honestly stated that since the population status of the bowhead is not known the impact of the increased native take is uncertain. The final draft lends an air of certainty that does not exist.

Page 31: "Increasing at an unknown rate" was changed to "increased at an unknown rate before 1970." There is no basis for this change and the next paragraph regarding Eskimo remarks in 1976 about increases in whale sightings and prediction of a large harvest was deleted.

Page 34: A discussion of live whales found with old fragments of bomb or harpoons in them is deleted as is the discussion of possibilities of surviving a hit.

Page 35: Deleted passage saying that powder charges are small and that a whale could in fact survive even if bomb explodes.

Page 54: States a conclusion as to Impact on the Bowhead Whale that is unsupportable.

Page 55: The impact of increased Eskimo harvest of the grey whale has been watered down. This is deleted in other parts as well.

Page 57: In part (c), a reference to other recent native hunting prohibitions was deleted.

Page 58: A whole section recognizing the probability of legal actions by the Eskimos is deleted.

Page 59: "Evaluated" was changed to "reevaluated".

Page 59: The mitigating measure assumes a one-season prohibition.

Page 60: Documentation of how high food prices in Barrow area is deleted in the argument re food stamps.

Page 61: A paragraph was deleted that indicated how heavily NMFS relied upon Eskimo cooperation in its research efforts.

Page 62: One positive change is the addition of the section here on the Impact on the Eskimo. Recognition is given of the possibility of Eskimo cooperation if an objection is filed.

Page 64: One of the most serious deletions occurred here in (e) after the discussion of Carter's public statements. The language deleted is:

"It should be noted, however, that the adverse effects on the U. S. efforts for international whale conservation may be mitigated to some extent by the fact that aboriginal whaling is different from commercial whaling. The U. S. moratorium position and the New Management Procedure relate to commercial whaling only."

Response to Mr. Sutcliff's comments

A. (1) Spring 1977 harvest statistics were not available until shortly before the IWC meeting. It was the significant expansion of whaling effort, the increase in the number of whales killed and particularly the number struck but lost in the spring hunt that precipitated the IWC decision this year. Until spring 1977 no one knew the seriousness of the problem or the probability of international intervention.

There was no opportunity for the United States to defer notification of the IWC decision on bowhead subsistence hunting.

- A. (3) Comments were received inquiring as to whether the International Whaling Convention governs non-commercial, subsistence whaling. This has been addressed in the FEIS. Arguments that the Convention does not regulate subsistence whaling are based on provisions of the Convention and certain records from its preparatory stages (travaux préparatoires), as well as the Whaling Convention Act. However, the position that the IWC does have jurisdiction to regulate native whaling would seem to reflect the international consensus or interpretation of the issue in light of the IWC's recent action eliminating native take of bowhead whales.

The prohibitions of the Convention are expressly made applicable to "factory ships, land stations, and whale catchers under the jurisdiction of the Contracting Governments" and to "all waters in which whaling is prosecuted by such factory ships, land stations, and whale catchers." International Whaling Convention of 1946, Article I, Section 2 (herein the "Convention"). No reference is made to native subsistence whaling in the Convention itself.

Since factory ships and land stations are not involved in the Eskimo bowhead fishery, the issue is whether this fishery is conducted by "whale catchers". This phrase is defined in the Convention as a "a ship used for the purpose of hunting, taking, towing, holding on to, or scouting for whales." Convention, Article II, Section 3. In fact, the fishery is largely conducted in native craft called umiaks about twenty-five feet in length, usually propelled by outboard motors except when in the vicinity of whales. The kill is made by lance or shoulder gun, both using explosive charges.

It is asserted that the Convention applies only to commercial whaling because native whaling craft cannot properly be categorized as "whale catchers", being too small to be considered "ships". While ships are often thought of as larger vessels, such a qualification would defeat the Convention's express application to vessels engaged in such diverse activities as "taking, towing, holding onto, and scouting for whales". Even in commercial whaling operations, smaller boats are used to perform some of these functions; a distinction based purely on size would be self-defeating. (See also, Black's Law Dictionary which defines "ship" as a vessel of any kind employed in navigation.) This also appears to have been the view of Congress, since the definition of "vessel" in the Whaling Convention Act includes "every kind, type, or description of water craft". 16 USC 916(e).

A more compelling argument that the Convention does not apply to non-commercial native whaling is based on comments of representatives from various governments during the negotiating of the Convention. On Nov. 21, 1946, a dialogue occurred between the Soviet delegate, the U.S. delegate, and the Chairman, which, while not entirely clear, tends to reflect an understanding that the proposed Convention would not apply to aboriginal taking:

"340. MR. TVERIANOVICH (U.S.S.R.) (Interpretation): Mr. Chairman, again we offer our apologies for being late to the Conference. We should like a clarification of paragraph 1, page 16. That relates to the catching of grey and right whales. We would like to know whether the prohibition with respect to killing grey whales is still in force?

341. CHAIRMAN: According to the agreements now in force, the killing of grey whales and right whales is prohibited. The thing behind this article is that both of these species are in immediate need of all the protection that we can give them. They are now so depleted in number that unless we take certain precautions the stock of both probably will be exterminated within a very short time.

342. MR. TVERIANOVICH (U.S.S.R.) (Interpretation): If the Conference has provisionally passed this point. We still would like to make this observation. It concerns our northern natives or aborigines, who are located in the Karjaskoe and Chukotskoe regions and take whales in the Bering and Chukotsch Seas. These natives kill whales for food, as whales and other sea animals are the chief source of their sustenance.

343. Our Government would like to protect the interests of these natives and permit them to catch a limited number of whales. Our Government knows that these natives will not catch many whales.

344. CHAIRMAN: I should point out that this schedule applies to commercial whaling. In the Geneva convention aborigines and natives are specifically excluded from the terms of this agreement. This agreement applies to commercial whaling.

345. MR. TVERIANOVICH (U.S.S.R.) (interpretation): Thank you.

346. CHAIRMAN: Dr. Flory.

347. DR. FLORY (U.S.): Under the terms of paragraph 1 of the proposals on page 3, it is provided that the present convention applies to factory ships and whale catchers and land stations. Under that definition, as we interpret it, the Convention would not cover killing by aborigines-- not on a commercial basis.

348. CHAIRMAN: I think it is generally agreed that the aborigines take very few whales with their primitive equipment, and that the effect that they might have on whaling would certainly be negligible."

A further dialogue took place on Nov. 25, 1946, between the Soviet delegate, the U.K. delegate, and the Chairman:

"349. Paragraph 1 of the schedule states it is forbidden to take or kill grey whales or right whales. This wording, as we have stated, is taken from Article IV of the 1937 agreement. Is there a motion to refer this paragraph to the Drafting Committee?

350. MR. BOGDANOV (U.S.S.R.) (Interpretation): Mr. Chairman, as our Delegate has stated in the previous session of this Conference, there should be made an amendment to this Article. As previously stated, it is necessary for our national minorities in the north of our country to kill a small number of the grey whales for their own needs. Such a strict prohibition on the killing of grey whales will make it very difficult for them to procure their means of living. I would like to propose an amendment to this Article, as follows: except in cases when grey whales are killed for the means of living of the national minorities in the north of our country.

351. CHAIRMAN: Thank you, Mr. Bogdanov. Mr. Thomson.

352. MR. THOMSON (U.K.): Mr. Chairman, with regard to this proposed amendment, I do not know whether the Delegation of the U.S.S.R. realizes that this exception comes within the general scope of the convention which is limited to factory ships and land stations. If these operations to which the U.S.S.R. Delegation refers are carried on by people who do not use factory ships or process their catches at land stations, I do not think this prohibition would apply to them, in which case they may consider that any amendment is unnecessary. It is, of course, provided for in the Geneva Convention that aborigines who only use small boats and kill only for their own needs are allowed to do so.

353. CHAIRMAN: This convention applies only to factory ships, land stations, and whales catchers.

354. MR. BOGDANOV (U.S.S.R.) (Interpretation): I quite understand the statement made by the Delegate of the United Kingdom, but I would like to make an explanation of this point. The inhabitants of the northern districts of our country do not have at their disposal all the modern means for killing whales. They carry out this killing of whales by all kinds of means and by such equipment as they have at the time. Meteorological conditions and other weather conditions at some times are so difficult that they simply cannot kill any whales with their equipment. That is why it is necessary for our Government, in order to prevent the starvation of this population, to send out a vessel to kill enough whales for the needs of this population.

355. Our Government is always precise in the carrying out of their international agreements, and if the amendment to the paragraph that we want is not made, the population of the northern district of our country might starve."

Both Dr. FLory and Mr. Thomson (U.K.) apparently interpreted the Convention's jurisdiction over whale catchers to extend only to those whale catchers associated with land stations or factory ships, or at least those engaged in commercial activity. This qualification is not reflected in the Convention's definition of "whale catcher", quoted above, and seems to be further refuted by the fact that the Conference ultimately adopted a paragraph of the Schedule expressly excepting native whaling from the prohibition against take of right or grey whales:

" It is forbidden to take or kill grey or right whales, except when the meat and products of such whales are to be used exclusively for the local consumption by aborigines."

Schedule to the Convention
Section 2.

The 1931 Convention for the Regulation of Whaling contained a provision exempting native taking conditioned upon their use of traditional methods of hunting, and expressly prohibiting the use of firearms or motorized vessels. It should be noted that the Schedule provisions quoted above have the effect of accommodating both the Russian practice of suing a commercial vessel to collect grey whales for native consumption, and the use of firearms and motorized vessels by Alaskan natives. An argument can be made that the exception quoted above does not apply to taking by natives but rather refers only to taking by commercial methods for natives. The would support the view that the Convention does not apply to taking by natives.

However, the exception employed in the current schedule, which was adopted in 1976, includes both taking by aborigines and taking done on their behalf, thus weakening the position that the Schedule refers only to commercial methods of whaling. The relevant portion of the 1976 Schedule is as follows:

"There shall be no commercial whaling on species or stocks whilst they are classified as Protection Stocks. The following stocks are classified as Protection Stocks...

....
Right Whales - All Oceans

....
7. Notwithstanding the provisions of paragraph 6...the taking of gray or right whales by aborigines or a Contracting Government on behalf of aborigines is permitted but only when the meat and products of such whales are to be used exclusively for local consumption by the aborigines."

The best explanation of these discrepancies seems to be that, while individual opinions about this issue varied in 1946, opinion since that time seems to have moved toward an understanding that the Convention covered native taking. The 1976 Schedule is an example. Another is found in the 1976 U.S. proposal for a ten-year moratorium, where a specific exception was made for native taking. Since the Convention itself is ambiguous, these evidences of recent understanding are relevant to its correct interpretation.

The licensing and reporting requirements of Whaling Convention Act of 1949, 16 U.S.C. 916d, 916e, have also been used as evidence that the Act, as well as the Convention it implements, does not apply to non-commercial whaling. The argument is based on the fact that, since no licenses have been required of native whalers under the Act, it must have been the view of the U.S. that the Convention did not cover such whaling. But this does not withstand close examination. First, the licensing requirements are fairly specific and would not correspond to activities employed by aboriginal whalers. 16 U.S.C. 916d. By virtue of administrative interpretation of the Act, having in mind the economic situation of subsistence whalers, the whale-catchers license costing \$100 has been considered inapplicable to native whaling.

Furthermore, the reporting requirement established by the Act refers to the reporting requirements established by the Convention, which are restricted to whaling activities involving land stations or factory ships and would not be applicable to native take which involves only the use of the whale catchers. Schedule, Section 16.

Arguments that the Convention applies only to commercial whaling are further refuted by Article VIII of the Convention and provisions of the Whaling Convention Act of 1949 which make express exceptions for the take of whales in the course of scientific research. If the Convention were limited to commercial whaling, such provision (as well as the exception for aboriginal take of grey and right whales) would not be necessary.

While the I.W.C. action eliminating the native harvest of bowhead whales is evidence that the representatives of member nations currently believe that the Convention's jurisdiction does extend to native subsistence whaling, a complete examination of the documents surrounding the Convention's negotiation and drafting might reveal other indications (such as those appearing in the Minutes from the Fourth and Seventh Sessions quoted above) of the intent of the drafters. If there is further evidence that the drafters did not intend it to apply to non-commercial take by natives, then an argument that the I.W.C. took an action in 1977 exceeding its authority might possibly be made. Such an argument must be supported by the assumptions that 1) the 1946 Schedule provision addressing native take was meant to apply exclusively to commercial take for native consumption, and 2) the Convention's jurisdiction over native whaling is more accurately reflected in its original Schedule than in provisions subsequently adopted.

Finally, it should be noted that if the Convention is interpreted as not applying to native taking, then the United States could in principle maintain the Alaskan take of bowhead whales without filing an objection with the I.W.C. If the I.W.C. is found to lack such jurisdiction over the native take of whales, effecting a controlled hunt under the Whaling Convention Act would not be possible, and regulation of the bowhead hunt would have to proceed under the Marine Mammal Protection Act or the Endangered Species Act.

A. (4) and B. Mr. Sutcliffe also indicated that the DEIS should be supplemented with further information on the role of the Marine Mammal Protection Act, on President Carter's statements, and on the trust responsibility to native people. Such supplemental information has been included in the Domestic and International Regulatory background section.

C. All national conservation groups that have gone on record, have recommended that the United States not file an objection to the IWC decision.

E. The native exemption on the taking of bowhead whales will be on the IWC agenda in June 1978. The IWC decision may be reconsidered at a special meeting of the Commission in December 1977. Please see remarks on this subject by Mr. Eisenbud of the Marine Mammal Commission.

F. (1) Additional information on alternative wildlife resources as provided by Mr. Robert A. Rausch has been incorporated in the text of the final EIS.

F. (2) Additional information on the actual cost of food in rural Alaska as well as the difficulty involved in supplying an alternative food source on a regular basis to remote villages has been incorporated in the text of the final EIS.

F. (3) No information is presently available on the additional cost to the Government if an action is taken which

will necessitate providing an alternative food source and welfare.

F. (4) Additional nutritional information provided by Margurite Smith of the Nutrition and Dietetics Branch of the Indian Health Service has been incorporated in the text.

G. The IWC Scientific Committee had the best information available. The data were no worse and in some cases were better than that used to justify stringent quotas on other whale stocks.

Three sets of data were considered by the Scientific Committee when they deliberated the effect of the Eskimo harvest on the bowhead stock. In order of importance, these were:

1. Harvest data supplied by the NMFS.

Especially in recent years these data are quite precise and show a greatly increased take since 1970 (Table 2.). The Scientific Committee was dismayed at the record-high harvest of 48 in 1976 plus an additional 8 killed but lost. The Committee was also greatly concerned about the high number of whales that whaling crews reported struck but lost during the spring 1977 whaling season.

2. Estimates of abundance provided by the NMFS.

NMFS presented the first systematic sighting data ever produced for bowhead whales migrating past Pt. Barrow. The limitations of these data are pointed out in the text. The

Scientific Committee considered the limitations of the data and decided the best estimate of the present population size affected by Eskimo hunting is 1000 animals. Whether this estimate is conservative, will only be decided after more complete population data are obtained.

3. Estimate of initial stock size provided by Mitchell
(Document 33)

The Scientific Committee accepted Mitchell's analysis as the best available for the initial size of this stock of bowhead whales, with some qualification. Mitchell's analysis is discussed on pages 23 and 24 of the DEIS, and page 24 gives the conclusion of the NMFS scientists based on examination of Mitchell's data that the initial stock size was about 12,000. Mitchell's document and document #10 by Braham and Krogman (NMFS) independently concluded that the peak years of exploitation for this population were 1851-1860, and that Rice's (1974) identification of 1868-1886 as the peak period is in error; therefore, Rice's estimate of 4000-5000 as the initial population size is probably too low.

The DEIS gives data on the number of whales passing Barrow in 1976 but similar data are not available for earlier years to determine whether there is a trend of population numbers. As far as we know, no data are available which would yield information on the trend of the bowhead population.

Information on numbers of whales struck and lost in recent years has come from interviews with whaling crews. Such information is believed to be conservative, and the number of whales struck but lost may be greater than reported by whaling crews.

The editing changes in the earliest drafts of the Draft EIS, reflect both modifications for correctness and for clarity. If they imply as suggested by Sutcliffe that the changes strengthen the case for not objecting, it is inadvertent. Several examples of the reasons for such changes follow:

The first item cited by Mr. Sutcliffe on page 2 as originally drafted would imply that the population of bowheads is already increasing and that the total moratorium would simply increase the rate of recovery. We do not know with certainty and trends, although the best data we have suggest that the rate of removal of bowheads from the population since 1970 may exceed the recruitment rate. We are not sure in fact that the population can recover even if a total ban is enforced, hence the modification.

The changes on page 31 were made simply to avoid the development of a completely speculative argument that would have to follow the view originally stated regarding the prevalency of young animals indicating a healthy increasing population. The absence of hard data to support either view, however, resulted in the inclusion of the modification which appeared in the published DEIS.

The early drafts of the DEIS are internal documents, the changes from the first draft to the final and public edition represent significant improvements in accuracy. Inevitable gaps in the treatment did occur, which we trust were closed by the combination of hearings and written comments on the draft.

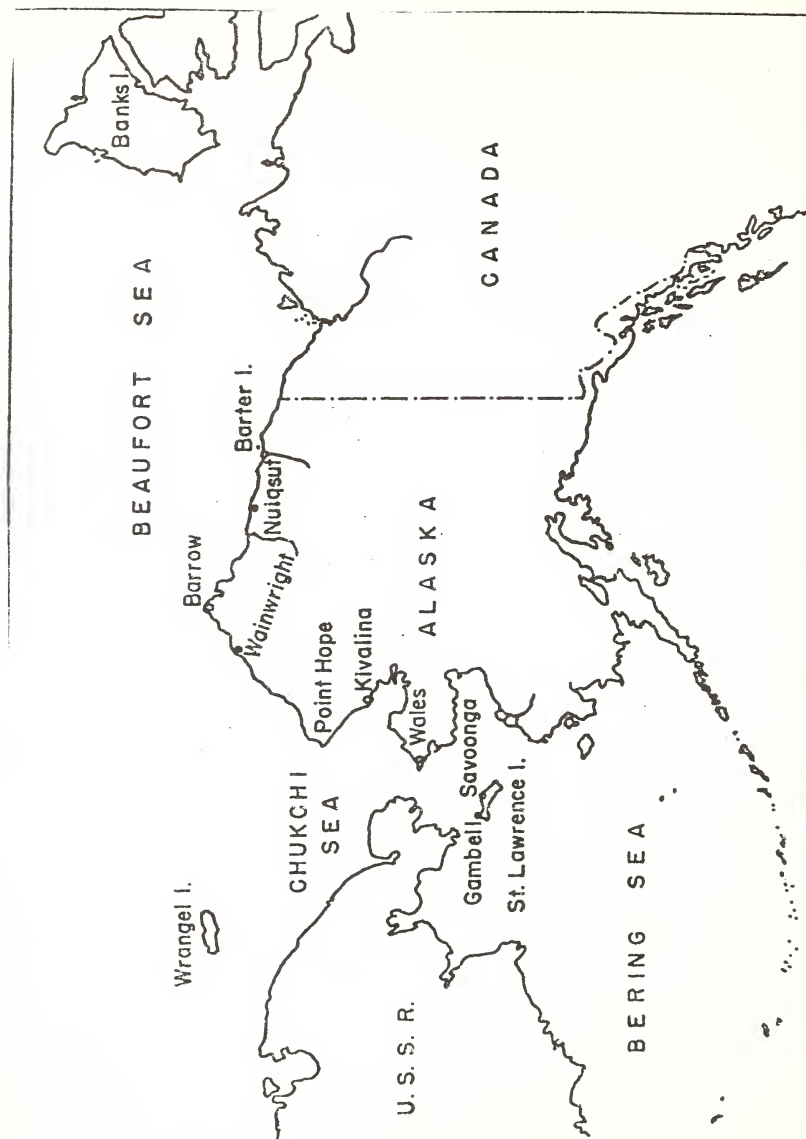
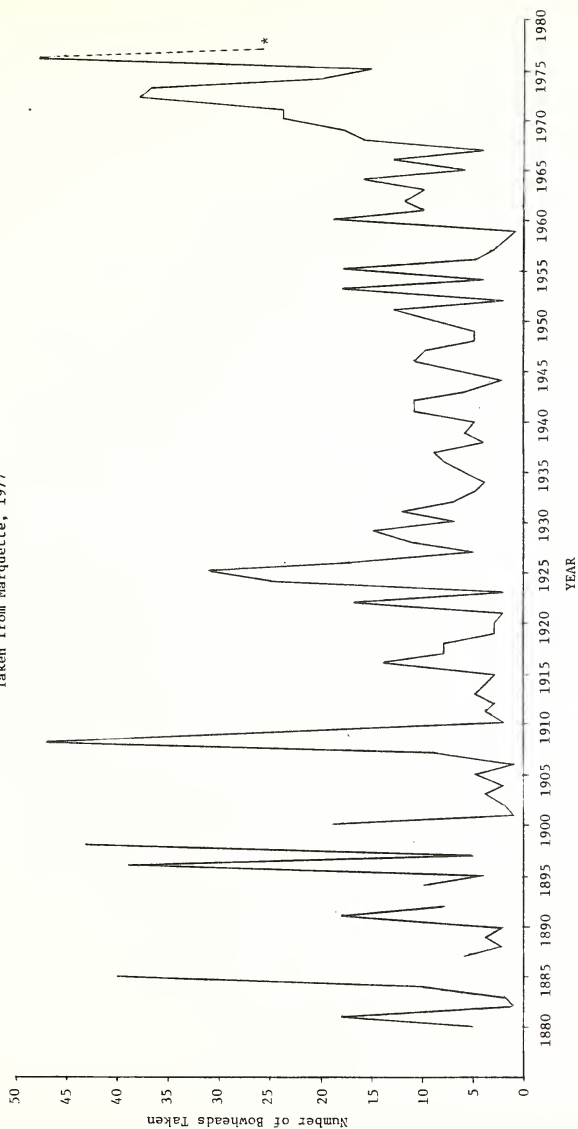


Figure 1. Map showing area discussed in text.

FIGURE 2

Bowhead Whales Taken by Alaskan Eskimos and Shore-based Stations in the Western Arctic Ocean

Taken from Marquette, 1977



*Preliminary data; does not include fall 1977 harvest.

Table 1--Bowhead whales taken for USSR natives in recent years.^{1/}

Year	Chukchi Sea	Bering Sea	Total
1972	0	1	1
1973	0	2	2
1974	1	2	3
1975	0	2	2
1976	0	0	0

Source: Personal communication from Dr. V.N. Mineev.

^{1/}Marquette, 1977. The 1976 Catch of Bowhead Whales (Balaena mysticetus) by Alaskan Eskimos, with a Review of the Fishery, 1973-1976, and a Biological Summary of the Species. May 1977. Northwest and Alaska Fisheries Center Processed Reports. NMFS. 80P.

Table 2 - Bowhead whales taken by Alaskan Eskimos and Shore-based Stations in the western Arctic Ocean

Year	Barrow	Pt. Hope	Wainwright	Nuiqsut	Icy Cape	Kaktovik	Gambell	Savoonga	Kivalina	Misc.	Total
1852	17										17
1853	7										7
1854-79											-
1880		5									5
1881	18										18
1882	1										1
1883	2										2
1884	10										10
1885	28	12									40
1886											-
1887	6										6
1888	2										2
1889	4										4
1890	1	1									2
1891	18										18
1892	8	0									8
1893											-
1894	10										10
1895	4										4
1896	6	33									39
1897	5										5
1898	42 $\frac{1}{2}$	1									43
1899											-
1900	19										19
1901		1									1
1902		2									2
1903	4	0									4
1904	2	0									2
1905	5										5
1906	1										1

Table 2 - Bowhead whales taken by Alaskan Eskimos and Shore-based Stations in the western Arctic Ocean
(cont.)

Year	Barrow	Pt. Hope	Wainwright	Nuiqsut	Icy Cape	Kaktovik	Gambell	Savoonga	Kivalina	Misc.	Total
1907	9	0								9	
1908	23	13			10-12					46-48	
1909	11	13			1					25	
1910	2+									2	
1911	1	3								4	
1912	2	1								3	
1913	4	1								5	
1914	1	2			1					4	
1915		3								3	
1916	5	7	1						1	14	
1917		3			3				2	8	
1918	1	7								8	
1919	1	2								3	
1920		3								3	
1921		2								2	
1922	1	13	3							17	
1923										2	
1924		16								2	
1925	19	10	2						2	25	
1926	4	13							9	31	
1927	2	3								17	
1928	11									5	
1929	15									11	
1930	7									15	
1931	11	1								7	
1932	7									12	
1933	5									7	
1934	4									5	
1935	6									4	
1936	4	4								6	
										8	

Table 2 - Bowhead whales taken by Alaskan Eskimos and Shore-based Stations in the western Arctic Ocean
(cont.)

Year	Barrow	Pt. Hope	Wainwright	Nuiqsut	Icy Cape	Kaktovik	Gambell	Savoonga	Kivalina	Misc.	Total
1937	9										9
1938	4										4
1939	6										6
1940	0	5									5
1941	2	8		1							11
1942	10		1								11
1943	6										6
1944	0		2								2
1945	3	3									6
1946	9	2									11
1947	4	6									10
1948	5	0									5
1949	0	4		1							5
1950	4	2		2							9
1951	9	4									13
1952	0	2+									2
1953	17	4					2				23
1954	1	3									4
1955	19	1	1				2				23
1956	2	2					1				5
1957	0	3					0				3
1958	0	2					0				2
1959	0	1									1
1960	15	4									19
1961	6	2	1				1				10
1962	5	6	1								12
1963	5	3	2								10
1964	11	1	1						1		16
1965	4	2	0								6
1966	7	5	1								13

Table 2 - Bowhead whales taken by Alaskan Eskimos and Shore-based Stations in the western Arctic Ocean (cont.)

Year	Barrow	Pt. Hope	Wainwright	Nuiqsut	Icy Cape	Kaktovik	Gambell	Savoonga	Kivalina	Misc.	Total
1967	3	1	0								4
1968	10	3	2				1				16
1969	11	3	3							1(Wales)	18
1970	15	8	0						1		24
1971	13	6	2				1		1	1(Wales)	24
1972	19	14	2				2		1		38
1973	17	7	3	1		3	2	4			37
1974	9	6	1			2	2		0		20
1975	10	4	0				1		0		15
1976	23	12	3			2	1	7	0	0(Wales)	48
*1977	19 <u>2/</u>	2	2				2		1		26

*Preliminary data as of May 31, 1977; does not include Fall 1977 harvest.

1/Combined catch of Eskimos and two vessels.

2/Included two stinkers: (whales recovered after being dead several days).

Table 3. Number of Alaskan Eskimo Crews Participating in Spring Whaling in Recent Years.

<u>Location</u>	<u>Year</u>					
	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>
Barrow	25	27	28	21	30	36
Point Hope	---	---	11	10	13	14
Wainwright	---	---	6	2	4	8
St. Lawrence Island	---	---	---	8	23	23
Kivalina	---	---	---	5	5	3
Wales	---	---	---	---	---	2

--- Indicates that information is not available.

Table 4. Population of Eskimo Villages.

<u>VILLAGE</u>	<u>1950</u>	<u>1960</u>	<u>1970</u>	<u>1974</u>	<u>1976</u>
Barrow	951	1314	1909	1936	2031
Point Hope	38	54	369	372	498
Nuiqsut	-	-	-	-	212
Wales	141	128	121	104	168
Wainwright	227	253	307	344	369
Gambell	309	358	357	356	842
Savoonga	219	292	357	363	
Kivalina	117	142	183	179	191
Kaktovik (Barter Island)	46	120	108	108	112

Table 5.

Number of bowheads taken, known killed but lost, and known struck but lost, in Alaska Eskimo fishery 1973-77.

	<u>Number Landed</u>	<u>Known Number Killed but Lost</u>	<u>Known Number Struck and Lost</u>
1973	37	0	10
1974	20	3	28
1975	15	2	26
1976	48	8	35
1977*	26	2	77

*Incomplete; data for 1977 autumn season to be added.

Table 6. -- Data collected by Foote^{1/} on numbers of bowhead whales that were struck and lost compared to those killed and recovered for various years from 1915 to 1962, at Point Hope, Alaska.

Date	Killed and Recovered	Struck and Lost
1915	3	3
1916	7	1
1917	3	2
1940	5	8
1951	4	8-10 ^{2/}
1956	2	3
1960	4	10
1961	2	2
1962	<u>6</u>	<u>1</u>
Totals	36	40

^{1/} Personal communication, D.C. Foote to D.W. Rice, 2 November 1964.

^{2/} The larger number (10) was used to obtain total of 40.

Table 7. Distribution of certain bowhead whale parts
to groups or individuals at the time of harvest.

Tissues and Organs	Recipients of bowhead whale parts	
	Point Hope <u>1/</u>	Barrow <u>2/</u>
1. Meat & Muktuk, from navel to fluke (and/or parts thereof in two strips around girth of animal)	Captain <u>3/</u>	Captain & crew
2. Back (from flippers to blow hole to above strips).	1 st . Crew <u>4/</u>	
3. Underside (from eye to above strips)	2 nd & 3 rd Crews	
4. Flippers	2 nd & 3 rd Crews	One to captain One to his crew
5. Baleen	1 st . Crew	$\frac{1}{2}$ to captain $\frac{1}{2}$ to butchers
6. Tongue		$\frac{1}{2}$ to captain & crew $\frac{1}{2}$ to "Nigek"
7. Lower Jaw	4 th - 7 th Crews	
8. Rostrum	All crews	
9. Fluke	Spring festival <u>5/</u>	
10. Tail and Peduncle	Spring or fall feast	
11. Lower Lip		divided among Captain & Crew and "Nigek"
12. Skull	returned to sea	left on ice
13. Tympanic Bullae	Captain	Captain

1/ from Van Stone (1962)

2/ from NMFS harvest and census crew notes collected Spring 1977,
and testimony from Barrow public hearing 12 September 1977
(R. 55).

3/ the whaling captain whose crew first struck the animal

4/ crew of Captain 3/ who struck animal first

5/ after harvest.



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